



A Monthly Journal of Agriculture, Horticulture, Education and Domestic Economy, Adapted
To the Wants of the People of the Mississippi Valley.

VOL. VII.

SAINT LOUIS NOVEMBER 1855.

NO. 11.

The Valley Farmer.

PUBLISHED MONTHLY.

N. J. COLMAN, EDITOR & PROPRIETOR,
E. ABBOTT, Associate Editor.

OFFICE 218 BROADWAY AND 908 FOURTH STREET,
(Between Franklin Avenue and Morgan street.)
Entrance on Fourth street,
ST. LOUIS, MO.

TERMS.

THE VALLEY FARMER is published on the first of each month, each number containing 48 large octavo pages (including 8 pages devoted to advertisements of matters of interest to farmers,) and is offered at the following rates:—

Single copy, one year, \$1 00
Four copies, \$3; seven copies, \$5; Fifteen copies, \$10
Payments, in all cases, must be made in advance.
Remittances in gold coin, current bank notes, or postage stamps, may be made by mail at our risk.

AGENTS.—Postmasters and Merchants throughout the country are authorized to act as Agents, and every friend of the enterprise is respectfully requested to aid in extending its circulation.

ADVERTISING.—Advertisements are inserted in the ADVERTISING DEPARTMENT of the Valley Farmer at the following rates:—One insertion of 12 lines, \$1; each additional insertion, 50 cents; 12 lines one year \$6; each additional 12 lines one year, \$4; one page, one insertion, \$7; each additional insertion, \$5; one page, yearly, \$60; Cards of six lines or less, one year, \$6.

TO OUR READERS.

Our readers will learn from this number of the *Valley Farmer*, that we are no longer the proprietors of this journal. We have conveyed it with its list of subscribers, to NORMAN J. COLMAN, Esq., of this city.

It is now nearly seven years since we commenced the publication of the *Valley Farmer*. We started it at a very unpropitious time—when far less interest in agriculture and agricultural journals was felt and manifested than now. For many years we were compelled to struggle on with a small list of subscribers which would

not justify us in publishing it. But we saw the necessity of an agricultural journal at this point, to accommodate the farmers of this portion of the Western country, and we knew that if rightly conducted, it would in time, obtain a circulation which would justify us in its publication. We are happy to state that in this we have not been disappointed. We have the satisfaction of knowing that it has a list of subscribers which will enable its proprietor to furnish to its readers a good Agricultural Journal; and that it is now established upon a permanent basis, and we feel that in effecting this object, we have been instrumental in doing much good to the farmers of the Great Valley.

We desire in this article to return our warmest thanks to those who have so generously aided and supported us, not only by their own patronage, but in recommending the *Valley Farmer* to the support of their friends and acquaintances; also by using their personal exertions in obtaining large lists of subscribers for our journal.

As before stated, we have conveyed the *Valley Farmer* to N. J. COLMAN, Esq., a gentleman in our opinion well qualified to conduct it. He is a practical agriculturist and is devoted to the cause of agricultural progress. We feel assured that he will spare no exertions to make the *Valley Farmer* acceptable, nay almost indispensable to the farmers of the Mississippi Valley. The former editor will still remain connected with the *Valley Farmer* as Associate Editor.

WOOWARD & ABBOTT.

THE EDITOR TO THE READER.

In entering upon our duties as Editor and Proprietor of this Journal, we do so under a deep sense of the difficulties and responsibilities of the charge we assume.

The art, or science of agriculture, in its comprehensive nature, draws upon and appropriates to its own use most of the other arts and sciences. The plow, simple as it may seem, to most operatives, is full of mathematics; and for a just appreciation of the relations of its structure to its work, may draw upon the highest attainments of the mathematician and mechanician. The cultivated fields are so many chemical laboratories, in which the laborer, all unconscious that he may, peradventure, be a chemist, is applying some of the divinest and most beautiful processes of chemistry—elaborating from earth, air, water and their associated elements—the waving grass and the golden harvests.—And thus enumerating we might proceed until it would stand confessed that almost every important science lends its aid and contributes its power to the perfecting of agriculture. The difficulties, then, are manifest which surround him who undertakes to conduct an agricultural journal.

The importance and responsibility of the position will be apparent, from the consideration that the social and political prosperity of our people, is dependent upon, and inseparable from prosperous agriculture. Whatever we are in the West, and whatever we expect to be, depends upon it. It is the foundation of whatever commerce and manufactures we may claim. It is the source of our independence and growing wealth, and the power which compels the dependence of the consumers throughout the world upon us as a nation. Yet our soils, though exuberantly rich to-day, by bad culture may be wasted in half a century, and by an inferior system of agriculture our prosperity dwindle. The Great Valley must not go back—every year must add something to, and not take from, its fertility. Our systems of agriculture must advance with the

advancing age. Who then, can measure the responsibility of conducting a journal like this, whose office it will be to direct public sentiment in the methods of advancing so great an interest.

It was therefore with great diffidence and self-distrust that we obtained our consent to enter upon an undertaking at once so great and so arduous. Nor could we have done so dependent upon ourselves alone. Others there were, possessing much experience as agricultural writers, whom we expected to associate with us in the editorial department. And we are gratified in being able to state that in this we have not been disappointed. Not only does the former editor of this journal, who has conducted it from its commencement, remain in connection with it as associate editor, but we have also obtained the services of one of the most able agriculturists of Kentucky, H. P. BYRAM, Esq., editor of the agricultural department of the Louisville Journal. Those who are familiar with the able productions of that gentleman on various agricultural topics, which have appeared in the Louisville Journal and elsewhere, can readily appreciate the strength he will bring in aid of our undertaking. His life has been devoted to agricultural pursuits, and we know of no one better qualified to aid in conducting a journal of this character. His connection with our paper will not take place until the commencement of the eighth volume, which will be with our January number. Besides these we shall have the aid, as correspondents and contributors, of the ablest men of the West and South west.

Great and responsible then, as the undertaking is, strengthened by such assistance, we shall go forward in our enterprise with confidence, determining to leave nothing undone which may be within our power to do, and which may tend to make the *Valley Farmer* excel as an agricultural journal for the West.

It is a Western Journal—devoted to the interests of the Western Farmers—to the cultivation of western products on western

soil, and in a western climate. Then let all the people of the west, who feel an interest in the advancing prosperity of agriculture, lend us their aid by an interchange of enlightened sentiment through this journal as to the best modes of cultivation; and contributing whatever the observation and experience of each has attested to be of value, and thus each may appropriate the experience of all. And to such interchange of sentiment and contribution of observation and experience, we earnestly invite all our readers who feel an interest in the advancement of agriculture.

New Exchanges.

We have received among our exchanges the *American Veterinary Journal*, No. 1, of Vol. 1, published at Boston Mass., by S. N. Thompson, and edited by Gen. H. Dadd, M. D., Veterinary Surgeon. It is devoted to the diffusion of veterinary knowledge. It appears to be an ably conducted journal and we have no doubt will attain a large circulation. If the poor dumb brutes could speak, we have no doubt they would say to their owners—“subscribe for the *Veterinary Journal*.” It contains 32 pages, is printed on large type and on an excellent quality of paper, and is furnished at the low price of \$1.00 per year.

We have also received *The Homestead*, a weekly agricultural journal, published at Hartford, Conn., by Andrew Stark, and edited by Messrs. Wm. Clift, T. L. Gold, and Henry A. Dyer. It is published in good style, and its editorials display much ability. We wish it success. It is furnished to subscribers at \$2.00 per year.

Injury from Locusts.

We planted an orchard of the best varieties of apple trees last spring. We had taken particular pains, not only in selecting the best varieties, but in planting the trees, and hoped in a few years to partake of the fruit. But our hopes were destined to be blasted. The locust during the

summer destroyed nearly all of them. Not one in six is living. To look at them, one would think that some person had been drawing the teeth of a saw over the bark of every tree. We have no doubt that young orchards in this section of the country have been greatly damaged by these pests.

A New Variety of Hemp.

Our readers will find in the October No. of the *Valley Farmer* an article from the *Louisville Journal* on the subject of “Chinese Hemp.” It is from the pen of H. P. Byram, Esq., the editor of the agricultural department of that Journal. Anything from his pen can be relied upon with great confidence. His whole life has been spent in agricultural pursuits, and no influence could be brought to bear, which would induce him to recommend anything, unless he knew it to be worthy of such recommendation. Mr. Byram has kindly furnished us with specimens of this Hemp which can be seen by all who may call at our office. In our opinion it is destined to entirely supersede the variety now generally cultivated.

It is well known that the Chinese are not only the oldest but the best agriculturists in the world. And we shall not be surprised if other agricultural and horticultural products are obtained from that country which will as far surpass our own, as the Chinese Hemp surpasses that now cultivated here. We now have commercial intercourse with China and our enterprising agriculturists, in our opinion, cannot render a greater service, than by transferring to this country the most valuable products of that distant land. Of course, to suit this latitude we must look to Northern China. Whatever will succeed well there must do well here in the same latitude. The winters there are not less severe than here. Most varieties of our fruit had their origin in that Oriental land. And we believe that varieties could be transferred to this country surpassing our own. Who will take the lead in this matter?

The Eighth Volume.

The eighth volume of the Valley Farmer will commence with our January number.

It will be issued in large octavo form, printed with a new font of type, on an excellent quality of paper, made expressly for this journal, and in the best style of mechanical taste. The press-work will be done on one of Adams' large book power presses. It will compare in appearance, as we intend it shall in matter, with any agricultural journal published. The number for each month will be mailed to the subscribers promptly on the first of that month. We prefer to mail to our subscribers a little too soon rather than too late.

No Change.

We shall make no change in the size or appearance of the Valley Farmer until after the issue of the next number. Many of our subscribers desire to bind the volume, and to do this it is necessary that the numbers should be uniform. After the issue of the December number, however, we shall endeavor to present to our subscribers an agricultural journal which in appearance and matter will rank with the very best agricultural journals published, east or west.

Mr. and Mrs. Albot are both absent. Our readers will probably hear from them in our next number.

Officers of the Mo. State Ag. Society.

An election was held on the third day of the State Fair at Boonville, for officers of the Society for the ensuing year. The same gentlemen who had so worthily filled their offices the past year were reelected to their respective offices with two exceptions.

Messrs Samuel T. Hughes, of Howard, and Daniel H. Hickman, of Boone, were elected to fill the places of Col. E. Elliot, of Howard and Wm. F. Christy, of St. Louis.

FAIRS IN MISSOURI.

We are glad to see the interest which is being manifested by the citizens of Missouri in agricultural fairs. Nearly every part of our State has been enlivened by them during the present fall. It was our intention to visit the most of these agricultural exhibitions, and we had made arrangements for that purpose; but just as we were ready to start on our tour, we were confined to our bed by sickness. Upon our recovery most of the fairs had been held. We regret our inability to attend these exhibitions on many accounts. We were anxious to meet the enterprising farmers of Missouri, and witness the stock, products, &c., which would be exhibited. We hope another season we shall be more fortunate. Let us urge upon our readers the importance of forming these agricultural societies. Let them be established in every county in the State. They have a most beneficial effect, not only upon the members of such societies, but upon the farmers of every county in which they are organized. They beget a laudable spirit of emulation among farmers, and draw together the most enterprising citizens. The best breeds of stock, and the most valuable agricultural productions are exhibited. Spectators have an opportunity to examine these and discuss their relative merits. An able and instructive agricultural address is generally delivered on such occasions. Farmers have an opportunity to meet their brother farmers from various sections of the country—to compare experiences and views. Another feature which is being generally adopted at these fairs, is presenting an opportunity for the purchase and sale of the best breeds of stock, agricultural implements, &c. Every year these fairs will become more useful and valuable. We bid them God speed in our State, and throughout the Union.

We publish the list of premiums awarded at our State Fair to the exclusion of more interesting matter. We conceive, however, that it deserves a place in our Journal.

The Lawton Blackberry.

This variety of the Blackberry has but lately been brought into notice. We have read with much interest everything that has been said in relation to it. Thus far the verdict of those who have had opportunities of examining and testing it, is favorable in the extreme. We have been expecting to hear it denounced as a humbug, as many other new and much lauded things, after trial, have turned out to be. But we have the first word derogatory to it yet to find in the public journals or elsewhere.

It is stated that it came into notice in the following manner: A clump of blackberry bushes bearing fruit of very large size, and differing in form and appearance from the common blackberry, was found in an old field near New Rochelle, N. Y. These bushes were afterwards transferred to a garden and the fame of their uncommon size and productiveness spread throughout the neighborhood and the country around. They were cultivated by many of the citizens of New Rochelle, and among the number was Wm. Lawton. Mr. Lawton took much interest in bringing the fruit into notice. He presented some of the fruit to the Farmer's Club in the city of New York. Their extraordinary size and fine flavor elicited universal approbation. At the same meeting Mr. Lawton read a paper stating all he knew in regard to their discovery. For the interest which he had taken, and for thus bringing them publicly into notice the Club passed a vote of thanks to him, and named the fruit the "Lawton Blackberry."

Mr. Charles Downing writing in the Horticulturist, thus speaks of it:

"Having heard a great deal said about the Lawton Blackberry, for the past year or two, and knowing that many of the new fruits were overpraised, I made a special visit to Mr. Lawton's a few days since, to see for myself, and I can assure you I was well paid for my trouble. There is no humbug about it, and the only wonder is, that it has not been more generally introduced and propagated before. The fruit is large and sweet. It is an enormous bearer. Indeed, the quality (considering the large size of the fruit) sur-

prised me, and the berries were perfect. — Mr. Lawton informed me that they continue in bearing five or six weeks, and in favorable seasons much longer. He has some two or three acres, and will have plants to dispose of in the fall and spring. The latter, however, is the most preferable time for transplanting. Plant as early as the ground is in good working order."

We have ordered one hundred plants of this fruit, and as soon as we are able we will inform our readers how they succeed in this climate. They may do well in New York and poorly here. Many varieties of fruit succeed admirably in a northern and eastern climate and yet do badly in this.

FAIRS.

The third United States Agricultural fair was held on the last week of Oct. in Boston, Mass. That city granted the use of a public square of 50 acres and guaranteed the sum of \$20,000 to defray the expenses.

The New York State fair has just had its annual session at Elmira, which came off in flying colors and ended in a grand equestrian feat in which many ladies took part.

A fair has just been held in New York city in the crystal palace at which one man exhibited 20 distinct kinds of cranberries, raised in one meadow, and another more than 50 kinds of pears.

These fairs are eminently useful to the agricultural interests of the country, beside affording much innocent amusement and extending general good feeling in the community. How much better than military displays, circuses and all such idle and evil exhibitions.

"THE ILLUSTRATED HORTICULTURIST AND JOURNAL OF SUBURBAN ART," is the title of a new Horticultural Journal, recently started in New York. It is published by C. Reagle, 208, Broadway. It is a monthly journal of 72 Royal Octavo pages. Terms, \$2 00 per year in advance.

Judge Bates' Address.

In this number we publish the address of Judge Bates at our recent Agricultural State Fair. We bespeak for it a careful perusal by all our readers. Clear comprehensive and profound, it was worthy the occasion and the man who delivered it. Judge Bates' reputation as an eminent jurist, and as one of the first and most winning orators in America, is wide as our country. But it may not be known to our readers of other States, that he is an active, practical cultivator of the soil. Residing on a small farm within a few miles of the city (St. Louis), he aids its cultivation with his own hands, and under his enlightened direction his acres are made to yield abundantly. No labor seems so inviting to him as that of improving and beautifying his farm, and no position in life so alluring as that of plain farmer Bates. His duties as Judge of the Land Court, are arduous indeed, nevertheless, he finds time every day to bestow some labor and attention upon the adornment of his premises, the cultivation of his growing crops, or the improvement of his soils.

Systematic and orderly in his habits, one thing is not permitted to interfere with another. His duties as Judge he deems as paramount, they are due to the people, and so he is punctiliously punctual in their discharge. One has not to wait five, ten fifteen minutes for the Court after its sitting time; for sure as the index figure of the clock points to nine Judge Bates is upon the bench and business proceeds. If sickness or any other uncontrollable circumstance prevents this punctuality, he feels it incumbent upon him to explain the cause to the bar. How beautifully this fact illustrates his nice appreciation of justice and the proper discharge of one's duty. Looking at him in the discharge of his judicial labors, one might be led to suppose he was attracted to them by some irresistible charm; however that may be, agriculture possesses for him a charm far more fascinating, and the court labors of the day over, he seeks with gladsome heart his retired country

seat, and then he is at home in the deepest, widest and best sense of the word—home. And his friends too, are made to feel at home in his family. Possessing the finest conversational powers and great versatility of mind and range of knowledge, he is one of the most agreeable of companions, and every one feels at ease in his presence.

We are heartily glad to see Judge Bates standing out publicly in advocacy of improvement and progress in the art of agriculture; for the agricultural advancement of our State must be great and continuous when urged on by such men as he.

CULTIVATE.

The English language contains but few more important words than this. It intimates the progress and end of all that is great and best in human attainments. To the mechanic, the artist, the scholar and the Christian it is a word of equal value. The mechanic must cultivate his skill, his hands and his nerves, before he can shape nature's raw materials into the forms of usefulness he would make. The artist must cultivate his sense of beauty, form and color, his taste and talent, before he can, as with the wand of magic, cause the forms of beauty and the mimicry of nature to be born of his pencil or chisel. The scholar must cultivate his mind in the pursuit of knowledge and in the fields of philosophy and science before he can shine as a star or be accounted a man among the magnates of thought and learning. The Christian must cultivate his affections, his moral and religious sensibilities, the spirit of his master within him, before he can realize how excellent is the service of the Son of God, how sweet and sublime are the spiritual blessings of his religion. Yet as important as is this word in the expression of all good enterprises, and important as is the idea it conveys to all honorable success—it originates with the farmer. The tiller of the soil is the first cultivator. He gives birth to all ideas of culture. He plants the seeds of cultivation. He nurtures its germs and causes them to bud,

blossom and bring forth. He cultivates his plants, his animals, his soil and himself. His garden, his fields, his pastures and his barns show what can be done by the hand of culture. The beautiful rose that blushes in his yard, so full of petals and beauty, he has brought from the wild rose of the wood by the hand of culture. The apple on his tree, so large, so rich, so useful, he has got from the knotty crab, so sour and hard as to be useless, by the means of culture. The animals, so large and so strong and noble which now grace his fields and stables, are the stock sprung from ordinary scrubs and wild animals. But they are now what they are by cultivation. In this as in many other respects, the whole world are dependent on the farmer. We must all go to him to learn how to cultivate, and how important it is to cultivate.

But has the farmer learned all he may about cultivation? Does he realize its importance? If so, why do we see so much land half cultivated, so much miserable stock, fruit, grains, grass? Why do we see so much mockery of cultivation, such inattention to all the principles of agriculture? Such neglect of improvement in soil, in implements, in fences, in houses, in stock, in seeds, in information? Farmers have really but just begun to cultivate, though their profession is the oldest in the world and the most honorable, they have but fairly begun the work of improvement. As yet only a few of the farmers are wide awake to the meaning of the word *cultivate*, and are really trying to realize that meaning in their own experiences. The very name of this profession intimates that meaning. *Agriculture* means the culture of the fields; and as applied to farming now-a-days, the culture of all that may properly grow in the field, as fruit, stock, &c. More than anything else do farmers want to be awake to the advantages of cultivation, not only of their farms and their stock, but of themselves and their families. They want a larger and more thorough culture in every department of the business and in domestic life. Their hands, their

bodies, their minds, their children, need to feel the influence of cultivation. Just in proportion as they cultivate, truly will they rise in influence, wealth, dignity and worth.

For the Valley Farmer.

Prolific.

L. Holman, Esq., of Franklin county, has just shown me a sample of most beautiful, clear, white wheat, of which he has threshed 125 bushels from 4 1-2 bushels down, which 4 1-2 bushels was realized from one gallon. The wheat has been sold for 50 cents per bushel above the best article of his ordinary wheat.

In the same gentleman's garden there is an extraordinary gourd vine upon some poles and the paling, upon which I have just counted 40 gourds of good size, and I am informed that several have been taken off. Where is *Jonah's* gourd vine?

I measured yesterday, in same garden a tomato vine 16 feet in length.

There is a peach tree standing in the garden still laden (Oct. 25) with fine ripe peaches which seem proof against the cold, having endured the second snow storm. Near this peach tree there is a grafted plum now in bloom.

TIMOTHY.

For the Valley Farmer.

Receipt Book for Farmers.

In the 5th Volume, page 155 of the Valley Farmer I said something in favor of a Receipt Book. I now propose saying something more on that subject.

Farmers should know as much as possible concerning their calling. They may learn very, very much from experienced men and women, and from newspapers and agricultural journals; but all or most of the valuable information thus learned may soon pass from the mind. By penning these items in a book kept for the purpose, we have a chance to refer to them in future. And the mere act of writing anything serves, as most of you doubtless know, to imprint it indelibly on the mind. Most readers have probably heard of the advantage Dr. Rush derived, during the

source of Philadelphia in 1793, from having Entered in such a book a receipt for curing the Yellow Fever. Thousands of lives were then saved in that city and thousands since. How often do we read in the agricultural papers where subscribers have saved the lives of a valuable horse or mule or cow by the receipt learned in their papers and how grateful they are in consequence. A book made as I formerly suggested and as I again suggest, will perhaps be more practical—more convenient than your agricultural paper.

Such a book might contain receipts for curing the Botts, Colic, Fistula, Poll-evil, Scratches, &c., that horses are liable to—also Ague and Fever, Croup, Colic, &c., of men and children. Directions for preparing the ground for wheat, Corn, Oats, and the best method of cultivating and sowing the same. In one part might be registered the age and description of your negroes, horses, mules, cattle, hogs, so that if one runs or strays off you could describe and identify it, and thereby stand a much better chance to get it again. You might devote several pages to giving a table of the weights and measures of various articles, for instance, the weight of one brick, a pint or quart of flour, sugar, coffee, or salt, and so on. Such a table of weights will be found to be very convenient and satisfactory at times. There should be an index in the fore part for convenience of finding anything you want to see.

More might be said in favor of such a book, but a hint to the wise is deemed sufficient.

SOL. D. CARUTHERS.

Kinkead, Mo.

For the Valley Farmer.

Growing Hedge Fences.

MR. EDITOR:—This subject must be kept up. Hedge Fences are bound to win. So we believe, and our confidence justifies persevering advocacy, and careful guarding against error, and patient warnings of any misleadings we may know of.

Our mutual friend, Mr. F. M. Hill, of this city, thought he was doing me a great

kindness; when about a year ago, he took me aside at a gathering and told me seriously that the Osage Orange would not make a hedge fence, for he had tried it sufficiently and had failed. With anxious curiosity I examined into his case, and sought out the facts, which are as follows:

He set about half a mile of plants for a hedge on his farm, five miles from the city on the Manchester road, and it grew finely. He hired a man for \$18 per month, who, he says, "did little else in summer than attend to it." He cultivated it well and it grew high and fine. He paid no attention to any American teachings about the matter, either oral or written. He had made hedges of the Hawthorn in England, and knew how to make hedges. This was enough. His cutting and bending down was all done right and according to the surest of all rules, practical knowledge.—He made a fine show, but not a fence. It seems that no cutting and bending and growing downward can be made to avail with the Osage Orange plant. Mr. Hill failed to Englishize an American plant—that was all the failure. Last spring he grubbed it up and burned it, at six years old (which was the last and most heavy expense of all) after expending plenty enough upon it, according to his own showing, to have made him full four miles of good fence.

And now Mr. Hill's zeal as an economist and philanthropist is sufficient to lead him to impart freely to others the benefits of his experimenting. He has kindly bespoken the caution of the President and Directors of the Pacific R. R. Co. (of which he is himself a stockholder) against any reliance on the Osage Orange for fencing purposes! And his immediate friends and neighbors of course are all instructed in like manner. And I have no hope of resisting all the influence of this clever friend but with arguments equally practical and demonstrations of the same age, and little less laborious. And these will not be wanting any where in few years more.

Another Case.—Mr. H. Logan, who

lives out south beyond Big River, told me he bought half a bushel of Osage Orange seed, two years ago for \$12—and thought to fence in his farm from them. He planted them, he thinks, too deep—not according to any practical instructions. They all rotted—not one grew. The seed may have been of bad quality; but it is not likely that *all* were bad.

Other such facts are within my knowledge. We advise the careful observance of special directions in the management of seed, and that seed be bought of responsible parties who will warrant them.

I conclude my article with a short extract from the report of the late State Fair at Chicago:

"It has been a question whether the Osage Orange would succeed as a hedge plant. Dr. Wm. B. Egan, of Chicago, one of our progressive Illinois agriculturists, felt great doubts upon this point, but deemed it a matter of patriotism to make the necessary trial of the plant. He did so; and in five years, we learn, he has made a hedge impenetrable by man or beast, or bird. A committee of the State Agricultural Society have examined, and the following is their testimony in regard to it. We trust Dr. Egan will give to the public his mode of propagating the plant and its after culture:

OFFICE ILL. STATE AG. SOCIETY, }
CHICAGO, October 15. }

The Executive Committee of the Illinois State Agricultural Society being fully convinced of the practicability of successfully cultivating the Osage Orange plant into a protective hedge, take great pleasure in recommending to the farmers of Illinois, and to all who desire to settle on the beautiful prairie of the State, to plant and cultivate their hedges in accordance with the rules laid down in the best written treatises of the hedge plant.

Experience has shown that the result of such cultivation has been triumphantly successful, and the character of the Osage Orange as a hedge plant beyond a doubt.

S. FRANCIS, R. S. H. C. JOHNS, Pres.

The value of the Osage Orange for hedges is now settled. Nature will do her work in making of it an impervious hedge, if man will do his in its culture."

LOGAN SKEPPER.

St. Louis, Oct. 1st, 1855.

FARM HOUSES.

A good farm-house is one essential of successful farm-life. The farmer wants a comfortable home, where himself and family can be secure from the prairie blasts of winter and the damp exhalations of the rainy season. He wants such a home for health, for comfort and for improvement. It need not be a palace nor a costly structure. But it should be healthy, convenient and comfortable. To be healthy it should be dry and warm and at the same time well ventilated. To be dry it must be set some feet above the ground, and bad and unwholesome air should not be allowed to stagnate under it. The most of the farm-houses in the West are set too low. Their ground floors are but just above the ground. Perhaps on a low, flat, wet prairie the floors will not be more than one foot above the ground. In such cases the floor can seldom be dry. Dampness creeps up the walls and ceilings; the floors are not tight; the bad air rising from the vegetable mould decaying under the house, rises up damp and unhealthy, to permeate the whole house. In such houses people live, and with them closed up, sleep; and then wonder why they have so much sickness. Over almost the entire Western country the houses should be set at least four feet above the ground. The lower floors should be air tight, and the vacant space under the floor well ventilated.

It is best that people should sleep somewhat above the soil. Chambers are the best for sleeping rooms if they are roomy and airy. At all events no one should sleep near the ground if he can get somewhat above it. A tight roof, a tight floor, and a good elevation above the ground are three essentials of a farmer's house. Without these he is very liable to sickness. He is all the time taking in the seeds of disease. Let all house builders reflect before they build.

WARTS.—The oil from the outside shell of walnuts or butternuts will cure warts by a few applications.

HEALTH.

Health is the best stock in trade, the most valuable riches any one can have considered in relation to worldly pursuits. To the farmer it is especially so. A sickly farmer with a sickly family is indeed in a most miserable plight. Though he has land and money, he is poor. Though he has an abundance, he is destitute. Though he has intelligence, his influence is weak and his enjoyments few. Though he has a good character and good neighbors, a good family and good library and house, he is still a sad, disponding sufferer, of little value to himself, his family or the world. With health no man need be poor. Without it the richest man is poor.

Health is a good thing, and is placed at our own disposal. We can have it or not as we please. If we obey the laws of health we shall be healthy; if we disobey them, we shall be sickly. If we eat bad food, drink poisonous drink; breathe malarious or poisonous air, expose ourselves to too much heat or cold; or to severe changes, or inclemences of the weather overtask our physical powers, live in low, damp houses, sleep in close rooms, from which all pure air is excluded; are irregular in our habits, gluttonous, intemperate or reckless of health we cannot expect anything but weakness, sickness and premature death. On the contrary, if we are judicious in our diet, temperate and prudent in all our habits, exercise properly, but never too much, breathe good air, sleep enough in dry rooms, live in dry, comfortable houses, keep ourselves clean and comfortably warm, we have a right to expect health as our reward for obedience to its laws.

Health is much like money. We can have it if we choose the right course. If a man is idle, intemperate, imprudent, reckless of his means, shiftless, lazy, ignorant, heedless of all the arts by which money is made and preserved, he will be poor, as sure as the sun shines or the seasons roll round.

But if he is intelligent, industrious, economical, active, energetic, constant to earn

and careful of his earnings, prudent, persevering, steady in all his habits, applies his powers to the pursuit of gain, he is sure to have money, and in the end be rich. Business has its laws as well as health, and he who strictly obeys those laws will get money. So he who strictly obeys the laws of health will be healthy.

There are four rules, which if followed, will in most cases secure comfortable health. The first is to eat and drink nothing but the best, most wholesome foods and drinks; those which are sufficiently and not too nutritious, as nearly all grains, vegetables, and fruits, well cooked. Fresh, lean meats, are not particularly objectionable if the animals are healthy and their fat is not eaten. Fat, tallow, oil, in all their forms are particularly objectionable; as they are hard to digest and tax too severely the digestive economy. Spices, condiments, strong gravies, rich dressings, peppers, mustard, stimulents of all kinds, rich dishes, pastries, &c., are absolutely injurious in all instances. They are too concentrated, too strong, too acrid and exciting. Mustard that will draw a blister on a man's hand cannot be good for his stomach.

The second rule is to breathe good air, both by day and night. There can be no perfect health where we breathe bad air. This is one absolute essential. In our close houses, small tight rooms, and filthy pools and yards and holes about our premises we transgress this law.

The third is to take a proper amount of invigorating out-of-door exercise, and order all our habits into regularity. All our habits should be orderly, everything in its place and time and order.

The fourth rule is cleanliness. The whole body should be kept clean. It should be often washed in pure cold water. Obedience to these rules will generally secure health.

Dr. Dana, an accurate analytic chemist, estimates the salts contained in the droppings of a single hen in a year equal to those contained in 20 bushels of wheat.

Horticultural.

Fruit.

There are many reasons why farmers and gardeners should give much attention to the raising of fruit.

1. It is a sure way of securing an ample return for ones labor. Fruit is always in demand in market. It is an article of food—a real luxury, which everybody loves and ought to eat with every meal. And were it more plenty and a little cheaper no family in the country would do without it. The market is not half—not a tenth supplied. At the present prices thousands of families feel unable to purchase. If the prices were moderated a little the demand and consumption would greatly increase. No one need fear overstocking the market for the next hundred years. Set it down then that fruit raising pays well. If the business is wisely conducted it is very profitable. Single orchards this season have paid between two and three thousand dollars. And yet they require attention only a little part of the year; need not interfere much with the other interests of the farm; and if judiciously managed yield almost clear gain of their fruit. In this climate, one of the best in the world for fruit, orchards will produce in a very short period from their planting, and will yield an increase worthy of attention in a very few years. Every farmer should have his orchard as much as his house and barn. His orchard may bring him many a dollar which he otherwise would not get.

2. It is one of the very best articles of diet. No man should think of living without fruit; it should be eaten with every meal. One may almost as well do without bread or meat as without fruit. It is not very nutritious, but performs a function in the dietetic economy almost as essential as nutrition. The most of us eat too much nutritious food. It is too concentrated, too refined, too strong. It taxes too much the powers of digestion. Hence we have so much dyspepsia, weakness of the stomach

and bowels, so much dysentery, diarrhoea, cholera and like diseases. More unnutritious food would be better. We require bulk as well as nutrition in our food. Fruit helps to supply this, while it is gently laxative and materially aids the process of digestion. We regard it as far more essential than any other one article of food. And yet it is but little eaten in many families as an article of food. When properly eaten with other food it is doubtless anti-bilious and in this country is therefore doubly valuable. It promotes health and strength and long life.

3. An orchard not only adds to the purse of the farmer and the health of his family, but it adds to the beauty and value of his farm. A farm looks deficient and is deficient without an orchard. Few things add more to the beauty of a farm than long rows of thrifty fruit trees. Every one admires them. They make the farm look homelike, life-like and happy. They are an evidence of intelligence and civilization. They speak of refinement and culture. I have never seen an ignorant fruit-raiser. Men must have some intelligence before they can see the importance of fruit. A farm house is well protected from bleak winds and hot suns—from summers heat and winters cold, by good orchards about it. And such orchards so add to the beauty, comfort, healthfulness and value of a farm that no farm can really be a complete farm till it is so beautified and enriched. The value of any farm is greatly increased by the addition of good orchards. Therefore whoever would sell his farm or prepare it for sale should plant fruit trees on it.

A Horticultural Novelty.—The agricultural branch of the Patent Office has taken measures to procure seeds of the Bun-ya-bunya, a tree of the ar tribe, growing in Australia, where it flourishes in a region of not much greater area than thirty miles square. It bears a cone nearly two feet in diameter filled with seed the size of an olive, and of flavor more rich and delicate than that of the pine apple. It is so much esteemed by the natives that they at times travel hundreds of miles to partake of it.—*Washington Star.*

Cultivation of Fruit Trees.

Autumn is the best time for transplanting hardy trees, such as the apple, pear, quince, &c.; the peach, apricot, plum, &c., should be set out in spring. The fall planting favors the packing of the soil and prepares the young tree the better to vegetate in the opening of the season. Dig a hole four feet square by three feet deep—a foot deeper would be all the better—then put back the contents by piling the top soil at the bottom of the pit, adding fertilizers, such as bones, woolen rags, hen dung, horn piths, leather shavings, mortar and other refuse matter and manures. The tree when taken from the nursery should not be pulled up or twisted out, but carefully taken up with as many roots attached as possible; then set no deeper than it stood in the nursery, or still nearer the surface—as near as is requisite to the permanent footing of the tree, so as to bring it more under the influence of air and warmth. In setting, the roots should be put in a natural position; the heaviest roots turned to that quarter of the compass most subject to wrong winds, the size of the branches to correspond with the roots. This secures them in a measure against leaning and adds to their permanency. Fine soil must then be sifted over the roots, care being taken that each root be compact with the mould. A little water from a watering pot should be applied, followed by a mulch of saw dust or shavings, exhausted tan bark, chips, or any like material that attracts the moisture. A somewhat lithe stake should then be set near the tree, connecting it by a wisp of straw, or tow string. If the site selected for your orchard be not a rich, porous soil—the best for trees—fill the hole dug for your tree with suitable ground; and not with the earth taken from it. Potash and phosphate of lime should enter largely into the composition of orchard ground. Cold, wet soils are unfit for trees. Ashes and lime will neutralize the acidity, and may be applied to orchard grounds in general.

Draining will always be found beneficial, even for a dry soil.

After the tree is secured, fertilizers should from time to time (yearly) be added to the roots. For this purpose many things will apply—the best are bones (around which the young fibres of the roots will entwine, thus showing their fondness for their food), night soil, phosphates, (the latter, in the soil is indispensable), the various concentrated fertilizers, and, best of all, the carcasses of animals. All carrion should be faithfully transferred to the roots of trees. Care should be taken not to use the fermenting, strong ammoniacal manures, as they will injure the spongyoles of the tree, and render the tree unhealthy.

It is necessary to the success of a tree that its roots and branches be proportionate or equal in size. By taking up a tree this balance is destroyed, but may be restored by pruning. This should be done at the time of transplanting. Too great inroads on the branches, however, should not be made till after the falling of the leaves in autumn, or at the second year. Trimming is a delicate undertaking, and should be conducted with judgment and with knowledge in the case.

All bruised or injured roots or branches should be carefully cut off with a sharp knife, the slant of the cut being under, and closely to the sound wood. With respect to the future form of a tree, tastes differ. Some prefer an elongated tree, reaching high; others a low growth, of an oval or round form. The latter is secured by taking from the top what in the other case is removed from the side and lower branches. We have an orchard the trees of which are cultivated (by pruning) so low that the fruit, with a trifling exception, can all be reached with the hand while standing on the ground. There is no danger of neck-breaks, and uprooting by the storms. A great advantage is gained in picking, ladders being dispensed with. Besides, to us, the beauty of the orchard is increased as well as the convenience.

Great and diversified results can be se-

cured by pruning. Where growth alone is desirable as in young trees, only such limbs should be taken off as are necessary to give shape, in which case, slight pruning, repeated each fall, is preferable, unless the tree is long, in which case, in order to form a low top, the upper part of the tree must be cut off to suit the height. In this case the pruning should be deferred till the second year, or to the fall of the season of transplanting if the growth is healthy and thrifty. Where mere growth is to be secured, fall pruning is decidedly preferable. Summer pruning, when the tree is in full foliage and growth, checks the flow of the sap, and solidifies the wood, which is favorable to a fruiting condition. Therefore if you aim at growth, prune in the fall; if at fruit, in the summer. The first few years the former should be adopted; after that, summer pruning and manuring. After the first year, if the growth be good, pruning may be done extensively without injury. Care however, should be taken to encourage young shoots, with active buds on that part of the tree which is to form the new head. Large pruning increases and solidifies the bole of the tree, and *vice versa*.

To guard a tree against insects, parasite growths, &c., and to cleanse it when infected, apply, with a mop or brush, a solution of soda. White-washing has been the universal practice, and is still practiced, but with little or no good. White-wash, besides interfering with the functions of the bark, immediately begins to abstract carbonic acid from the atmosphere, thus neutralizing the causticity of the lime, and defeating the object intended. The best wash is a solution of Sal Soda, about a pound to a gallon of water, the salt to be heated to redness before dissolving. This application will clear a tree from fungi, cocoons of insects, &c., and leaves a smooth, soft bark, healthy in its functions, and capable of ready expansion to the growth of the tree.

A coat of saw dust, say two to three bushels to the tree, extending several feet from the tree, or of shavings, slightly pres-

erved by a light material, as of grass, is perhaps the best mulch that can be obtained. The ground is kept moist in the greatest drought. A sprinkling of ashes or lime preceding the application will correct whatever acidity the mulching may induce, while it will add to the fertility of the soil.

Trees are generally set too close. A liberal space between should be allotted, by which the tendency to lankness, as with forest trees, is obviated, and a better chance for sun and air secured. Currants, gooseberries, &c., may be advantageously cultivated in close proximity, and by pruning from the bottom upward, a considerable height may be obtained and if not too closely huddled, quite a tree, placing the fruit beyond the reach of hands, and improving both the size and quality of the berry. Fruit trees require isolation.

Keeping Winter Apples.

As much depends upon the manner in which apples are picked and put away, in order to keep well, we have thought proper to recommend, what in our estimation, is the best plan to adopt.

Apples intended for winter or spring use, should always be picked in dry weather, and, in the middle of the day. Let us admonish our readers, if they wish to have their apples keep well, not to pick, them in the morning before the dew is off, nor in the evening while it is collecting, nor during rainy weather. Anything like dampness or moisture, either in picking or keeping any kind of fruit, should be carefully avoided.

Apples should always be picked by hand. It is a lamentable practice to shake them off the tree, or to beat them off with long poles. They become bruised and injured thereby, and speedy decay is almost inevitable. If there are sound ones among them, they soon become infected by the diseased ones, with which they come in contact.

When apples are first picked, they should not be immediately placed in the cellar, as is too frequently the case, but should be

put in some place where they can undergo a kind of sweating process—for instance spread out on the floor of some out house, or chamber—always being careful to select a dry place. Let them remain there as long as the weather will permit, without freezing, being spread out as thinly as possible. They will then become thoroughly dry, and ready to put away for winter or spring use.

If they have not been assorted, this should now be carefully done—putting the finest, if intended for market, in clean, new barrels. Great care should be taken to have no unsound apples placed with them, as they will certainly infect the others—and a few unsound ones will also taint the taste of an entire barrel. If barrels are not at hand they will be placed in bins, made in the middle of the cellar, and suspended from the joists above. This allows a free circulation of air all around the apples—which greatly adds to their long keeping. If suspended from the joists, the bins can be above the floor sufficiently, to prevent rats from disturbing the apples. They can also be picked over and assorted, at any time, from all sides. Bins made in the center of the cellar, in this manner, are far superior to those made around the cellar walls, as is generally the case. The apples gather dampness from the walls, and, of course, this prevents their keeping well.

Even if apples are not intended for market, but for family use, we recommend that particular pains be taken in assorting them. Let those which are showing signs of decay, or which have been injured in gathering, be put away for immediate use. Apples after having been assorted and put away, for the winter, should be frequently examined, and those exhibiting unsoundness should be at once removed, or their deleterious effects upon those which surround them will soon become apparent.

The cellars in which apples, or any other fruit, should be placed, should be dry, cool, dark and well ventilated. If the cellar does not contain all these requisites it will be impossible to keep fruit long or well.

Peach Tree Borer. In the July number of the Farmer we notice a communication from Mr. S. Barent, in which, among other things he gives a detailed account of his endeavors to destroy the borers that were injuring his peach trees; his experiments proving unsuccessful.

He says: "I told Alonzo to dig around the roots or stems and put in about a peck of good ashes; but notwithstanding I had the mortification to see ten or twelve choice trees die during the summer."

It is possible, and very probable, that the ashes proved as effectual in the destruction of the trees as did the borers. We have sometimes scattered leached ashes upon the ground between the nursery rows of peach trees and plowed it in, with marked beneficial results in the growth of trees. One season we laid off a peck of ground on which to plant peach trees, and in the winter directed a man to haul a few loads of leached ashes upon the ground; and, knowing full well that an overdose would prove injurious to the trees, we were very particular to designate the quantity to be put on the land; but we being absent for a time, the man disregarded the instructions and hauled in enough to cover the ground six or eight inches deep; he did not scatter it, but left it in piles. As soon as we knew it we had a large portion of it removed and the balance distributed over the ground. In the spring this ground was plowed and peach trees planted thereon, but no tree would grow upon the places where the ashes was deposited in the winter. Much ashes, or strong lye at the roots will injure the trees, indeed we have known ashes to be placed at the roots of trees for the purpose of destroying them, and it did its work well.

The peach tree borer is a great nuisance and an exceedingly troublesome customer, yet one who understands its habits can combat with it more successfully than one who seeks to destroy it without knowing anything of them. The insect in its perfect state is a four-winged moth; this moth deposits its eggs in the summer months upon the trunk of the tree near the surface of the earth where the bark is moist and tender; the eggs soon hatch and the borer begins to work its way through and under the bark, where it may eat its way along wholly regardless of outward applications intended for its destruction. The object of the outward appliances is to prevent the moth from laying her eggs upon the trunk or roots of the tree, or to destroy the eggs; if they produce a brood of borers, to destroy them as soon as they are hatched, and before they begin their work of destruction. If the application is made after the borer has hid himself beneath the bark and is protected by it, and by the

gum that issues from the wound, it can have but little if any effect upon him, but it may destroy the tree. The trees should be examined in the spring. If any borers are there dig them out, cleanse the wounds and cover them with grafting wax that they may heal. Then to prevent others from getting there, draw the earth from about the trunk of the tree, take a piece of heavy paper or cloth and saturate it with coal tar, or perhaps a piece of India Rubber cloth would do as well, or better; bind it about the trunk of the tree, letting it come a foot above or six or eight inches below the surface of the ground, fill in upon this with clay. Arrangements of this kind have been found effectual in preventing the moths from laying its eggs upon the tree, as it will not lay them upon the cloths, or upon the tree where the bark is so hard that the young borer cannot penetrate it. In the autumn remove the covering and examine the tree, as the experiment may not have proved sufficient to exclude all the insidious borers. If any are found there dig them out at once, and not let them remain there to girdle the tree.

Peach trees on light soils are more liable to be injured by the borer than upon uncultivated clay soils.

We are intimately acquainted with some rare old peach trees that stand upon a clay soil, and have partaken of their delicious fruit for many years. We have often examined the roots of these old trees but have never yet found a borer in either of them.—*Michigan Farmer.*

Fruit versus Disease.

In a recent conversation with an intelligent person who had made long-continued and extensive observations on climate and disease, we were assured that nothing had a more beneficial influence in preventing intermittents and the other effects of malaria, than a moderate and regular use of wholesome, well ripened fruit. Our own limited observations abundantly confirm this opinion. This being the case, what millions in loss, to say nothing of the untold discomforts and suffering experienced by the settler of the great West, might thus be prevented or mitigated. Our western emigrants could carry no better medicine chest than a box well packed with well selected assortment of early bearing fruit trees. Dwarf pears for instance, often bear even the first year, and sometimes produce abundantly in the course of the first two or three seasons; we have known a peach tree to yield three pecks the third summer. The smaller kinds, such as strawberries, raspberries, gooseberries and currants, afford a quick return of very wholesome fruit. A little at-

tention and care of this kind in connection with a moderate share of information and intelligence, would doubtless prevent many serious losses, and avert a vast amount of positive suffering during the first few years of frontier life, when a sufficient degree of privation and inconvenience is often experienced, even with the blessing of uninterrupted health.—*Country Gentleman.*

AMERICAN OLIVES.—Mr. Robert Chisolm, of Beaufort, S. C., gives an account of his success in cultivating the olive. Mr. C. says he has cultivated this tree for about twenty years, and has thus far been entirely successful. His trees were imported from the neighborhood of Florence, and have borne large quantities of fruit every year, instead of only alternate years, as is the case in Europe. The grove of olive trees numbers between three and four hundred fine specimens of this far-famed tree, and is perhaps the largest in the United States. He adds: "I have succeeded, satisfactorily, in pickling the green fruit. Indeed, my pickled olives have been without exception pronounced by good judges in Charleston fully equal to any French importation, and by some much better." I am of the latter opinion, as they are less salty and more nutty flavored. I have twice received premiums from the South Carolina Institute for my pickled olives. I have pickled them both to imitate the French and the Spanish, and have also made a little oil."

AMERICAN TAMARINDS.—Wm. M. Singleton Esq., of Winchester, Va., has succeeded in obtaining a fine growth of Tamarinds from seeds procured at a confectioner's shop. One of these trees, eight years old, and measuring six inches in diameter, last year, perfected fruit of a quality quite equal to that imported. In addition to its value for fruit, it is a most beautiful ornamental tree, having a rapid growth, symmetrical form, and beautiful delicate foliage.

This tree is worthy of a trial upon the western prairies. The seed may be sown either in fall or spring, in drills about four inches apart, and covered with two or three inches of light rich soil. It is preferable to sow late in the fall, in order that the buds may be acted upon by the frost. When the shoots are about three feet high, they may be transplanted to the sites where they are to remain permanently. A handful of tamarinds from a fruit store will supply any one with seeds for a trial.—*Ex.*

THE GARDEN.—No land pays a higher rate of interest than the humble, despised garden. The quantity of vegetables which it can b-

made to produce, almost exceeds belief; and farmers may well open their eyes, when told that under good management two acres of a garden will be more profitable than twenty acres of a farm, as it is usually conducted. In the vicinity of cities and large towns, the raising of vegetables for market is conducted on a large scale, and is very lucrative, and even the poor man can, by his own labors at odd times secure an abundance of food for his family, which is as good as money saved, as well as earned.—*Schenck.*

Raising Fruit Profitable.

Much has been written upon the profitability of fruit culture, yet we think this matter is generally too much neglected and its importance too little appreciated. One reason of this is, that relatively quite too much attention has been bestowed upon raising fancy fruits. Almost every one who has written upon the subject has devoted himself to describing a new variety or to the best means of raising a small quantity of a great number of fruits. Take apples for example. We have in our agricultural journals chapter upon chapter describing the hundreds of varieties, while little is said upon the importance of producing an abundant supply of some of the leading and long established kinds, such as the Greening, Spitzenburg, Baldwin, Newtown Pippin, Seek-no-further, &c. If public attention has been rightly directed in this matter, why is it that even at this present time, as well as in all past seasons, there is and has always been a scarcity of these fruits in the market, even when they bring prices four times more than would amply pay for their production?

If we take fruit at its lowest market price, the ground occupied by one apple tree can in no way be made to yield for the same outlay more than a fourth of the value that can be gathered from the tree, even if the fruit be used for feeding only.

In addition to the causes of this state of things above mentioned, two others may be given. First, it has been feared that everybody else was going into the business; and second, the time required to raise a bearing orchard has led most persons to seek for a more immediately remunerating business.

To the first, it may be said that when we take into account the value of fruit for feeding stock, there can be no limit to the quantities that may be profitably raised for home consumption; and to the second, that the cost of rearing an orchard is very trifling, before it begins to yield returns. The ground occupied by growing trees is not lost, nor materially injured for other purposes; on the contrary, as we know by profitable experience, trees will flourish quite as well on ground that an-

nually produces hoed crops. We raised a thrifty orchard of six acres, containing three hundred trees, and yet every year gathered from the same ground large crops of corn and potatoes alternately. The trees thrived all the better from the constant cultivation of the ground around them. A few loads per acre of good manure was annually applied, and the corn and potatoes gave a good profit over and above the entire expense of cultivation, in addition to the cost of plants, grafting, and the annual care required by the trees.—At the end of eight years, our orchard was producing an annual crop of more than a thousand bushels of choice apples, requiring only to be gathered and taken to market, and yielding a *clear profit* of more than fifty dollars per acre. In this orchard we cultivated but six varieties—the harvest apple, August sweet, Fall pippin, Spitzenburg, Greening, and Seek-no-further. Each in its season, found a ready market, at remunerating prices. The produce of that orchard of six acres now eighteen years old, is to-day worth more than eighty dollars an acre, annually, for feeding purposes only. The soil was not unusually favorable; indeed, it was so rocky that it could with difficulty be tilled except with the hand hoe.

The process pursued was very simple. The natural trees raised from seeds by ourselves, were planted out and allowed to grow a year or two, and then grafted upon the stock or larger limbs; many of them were grafted by inoculation, and a few days spent each year in pruning, has been the chief care required by the trees. Each spring they were formerly well white-washed and the leaning trees tied up to a stake. To guard them from being barked by the traces, four white oak stakes, split out like rails, were driven around the trees. When first set out all the trees were leaned a little to the southwest, so as to brace them against the winds prevailing from that direction. There are few or no soils that will not produce apple trees with a little care in manuring. A cart load of stable manure applied once in ten years, to a plot of ground ten feet square—no matter how poor—will fit it to support a good tree.

While on this subject we will mention a young orchard that we visited last spring.—Several hundred trees were planted on a soil so barren that it would barely yield grass, but the trees were quite as large and thrifty as any we have seen of the same age. We learned that the only manure used was about a quart of urine to each, annually, though when first planted, a large deep hole was dug for each tree, and filled up with surface soil, mingled with a small quantity of chip manure.—*N. Y. Times.*

Address of Hon. Edward Ba,

Delivered at the State Agricultural Fair, held at Boonville Oct. 1st to 4th inclusive.

The following preliminary remarks are from a correspondent of the Missouri Republican:

Every one knows that Judge Bates is not in the habit of *writing* addresses: his genius is of that high order, that his thoughts leap from his brain like Minerva from the head of Jove, armed with all the power of logic and beauty of rhetoric. There is a fascination and earnestness in his manner, which those who have heard him, will never forget, and which cannot be displayed in all their force in a written address.

His brief, extempore prelude, where he reviewed and contrasted the present condition of things in Missouri, with the past, was eloquent. The position of the speaker was such as to eminently qualify him for such a theme. He had seen the State when it was a wilderness, and practiced his profession in his youth, when David Barton was on the Bench, and when the courts were held in rude huts or under the shady branches of the forest oak; a period when, as Judge Bates happily remarked a "Circuit Court excited more interest than a State Fair." Judge Bates has lived to see that wilderness "blossom as the rose," and in maturer life, to find himself the worthy recipient of the love and admiration, not only of the people of his own State, but of the Union.

After the brief and eloquent prelude, to which I have referred, he commenced his address, which is subjoined:

Mr. President and Gentlemen of the Society:

It is a pleasant sight to behold this vast assembly, and a delightful employment of the mind to contemplate the motives which have brought us here. The magnitude of the congregation is proof enough of the deep interest which the country takes in our cause, and the motives which prompt to the act, we may safely assume, are pure and patriotic, alike devout to the Creator, and beneficent to our fellow creatures.

We are not assembled here to exchange conjectures about the probable effect upon nations and dynasties of the awful struggle which is now reddening the waters of the Baltic and the Euxine with needless bloodshed, and dressing half a continent in mourning. We are not met to speculate upon the likelihood of revolutions in Western Europe, to be brought about by the new ideas of law and government which are constantly climbing from the lower strata of society to the high places of power, evoking as they rise the magic spirit of popular opinion, so potent

to change, to renovate or to destroy the world's old habits of thought and of will. We are not here to devise schemes for the advancement of partisan interests, or the nursing of sectional prejudices, nor to stir up strife among brethren upon artificial questions of government; nor to waste our energies in unprofitable efforts to advance this favorite man, or thwart that opposing faction. No, sir; no. We are here for wiser and better ends—for the attainment of objects far more likely to do good to ourselves and to others.

The only objects of this Society are production and enjoyment, and all the means to be employed are innocent and peaceful. Every effort then to attain such ends by such means is an accomplished good: for if it fail in everything else, it cannot fail to cultivate and expand the best faculties of the mind and the purest affections of the heart.

In all the conflicting labors of life, men struggle against each other, each counteracting the efforts of his adversary. Success is victory, and failure is defeat, and the victor rises by the downfall of the vanquished. No real good is accomplished by such a strife. The vanquished lose whatever the victor wins, and the victor himself often retires from the contest exhausted and impoverished. His shout of triumph is sounded with a feeble voice, and while he proudly wears upon his haggard brow a wreath of bloody laurel, he hobbles on crutches through the painful remnant of his life, with

*"An empty name, and a paltry fame,
And thousands lying dead,
While every glorious victory
Must raise the price of bread."*

Not so with the cultivator of the earth. His are no conflicting labors. He has no adversary. He is no man's enemy—no man's rival—no man's dependant. His success is unalloyed good, a comfort and honor to himself, a blessing to his neighbors, and a valuable service to his country. His is the most independent of all occupations, for he is not obliged to ask favors of any but the bountiful Creator. Sunshine, and rain, and dew, and the delightful succession of the seasons are all that he needs for the attainment of his worldly ends, and these, he knows, are rarely, if ever, denied to those who ask them with pure hearts and diligent hands.

When I was invited to address you on this occasion, I was inclined to think that a mistake had been committed. It did seem to me, that, considering the recent origin of the society, and the mixed character of our people, coming from every section of the country, and accustomed to a great variety of soils, climates and modes of culture, it had been better to select a man of practical experience,

and personal knowledge in farming—some man who could teach the young and advise his less experienced equals in all the multifarious economy of rural life. I am no practical farmer, and however much I may love and honor the "mother of all arts," I am all unfit to teach her votaries, who labor daily in her fields, how to do their work. My love may be found without discretion and my zeal without knowledge. Others who have gone before me in this pleasant duty and were far better supplied than I am with the means of knowledge and the faculty to communicate it, have rendered valuable service to the Society, by wise suggestions and clear explanations, concerning the great variety of soils and climates of our country and their natural adaptation to the different productions, both vegetable and animal; the various modes and implements of cultivation, and the judicious employment of chemical knowledge in the application of manures. These, and such like topics, I shall avoid, or touch upon very sparingly, for two very good reasons: First, my own deficiency in the knowledge necessary to enable me treat them so as to advance the pleasure and profit of my hearers; and secondly, because I desire to draw your attention chiefly to some other matters, directly connected with agriculture, but sometimes overlooked by the individual farmer who is too prone to consider himself rather as an isolated and independent existence, than as a member of a great social compact, acting a worthy part in a common effort, and all the while sustaining every one of his fellow members—matters which while they most nearly concern the interest and comfort of every individual, constitute the body and fabric of our social economy, and must needs give character, as wise or unwise, to the policies of our government, both State and Federal.

If agriculture consisted only in the cultivation of the earth for the mere purpose of supplying the cultivator with food, clothing and shelter, this broad and fertile valley would, doubtless, be the abode of a few thousand clownish inhabitants, who might eat and sleep and propagate their species, in abundant ignorance, and surrounded by a squalid plenty of the vulgar necessities of life. If these were indeed the only objects of agriculture, and such its low, restricted character, there would be small reason to complain of the injustice of mankind; through all past ages, in assigning to the tillers of the soil a degraded and servile condition. But such are not its objects and character. Its apparent degradation is a forced condition, unnatural to the intrinsic dignity and usefulness of the occupation, imposed originally by violence, and maintained, for ages, by the false policy of

oppressive governments. We need not go back to the early ages of the world, to Assyria, Egypt, Greece and Rome, to find out why predial labor was degraded—why it was scornfully asked, "How can he be wise who handleth the plow, whose talk is of oxen, who delighteth in the goad?" We need go back only to the middle ages of Europe, whose history is the beginning of our own. There and then, the Feudal System universally prevailed; and that system was a stern military aristocracy. All the land belonged to the feudal chiefs, and all its inhabitants were their tenants and vassals. War was the only source of honor and power; and all that a chieftain needed was soldiers to fight his battles, and be honored with his companionship in arms, and laborious drudges to work his lands, and thus procure the means of riotous living in the intervals of peace. Then, no man cultivated his own land. Nobles, Knights, and gentlemen were not farmers. Their lands were tilled by such of their vassals as would have thought it a promotion to be allowed to serve in the humblest rank of their martial following. And this was the condition of agriculture, for ages, in Europe. The agriculturists formed a weak, poor and subdued class. Hereditary oppression and contempt, on the one side, and timid submission on the other, could not fail to produce the natural effect—a feeling of conscious degradation, and an unresisting descent into ignorance and vice. For the spirit of man will bow with the body that habitually crouches.

When literature began to revive in Europe, and knowledge began to rise and assert its power, trade and the mechanic arts were the first to receive the benign impulse. These (trade and the arts) are essentially gregarious. They draw men together into markets, workshops, and towns. Here, while for mutual profit they plied their trades and exchanged the productions of their labor, they exchanged also thoughts and opinions. And in this process they could not fail to discover that they had a common interest and a common enemy. Their common interest required order, peace and security, and their common enemy was the Military Oligarchy, which then oppressed and degraded all Europe. Their occupations, so social in their nature, gave them, at once, the will and the power to combine for self-protection against the petty tyrannies that surrounded them. And hence arose towns and boroughs, which, freed from many of the cruel exactions of the feudal law, became markets of commerce, work-shops of skillful industry, and schools of modern civilization. Here the people enjoyed much of practical freedom, and exercised, to a good extent, the

glorious privilege of self-government. But they could not, at once, reform the hereditary abuses of government—they could not renovate nations in a day. They stood alone, isolated by dangerous foes. They were but green spots in the waste of despotism, few and far between. The fire of freedom still burned upon their altars, but it burned, through ages, for themselves alone. Its feeble light could not penetrate the artificial darkness of the rural districts, where the peasant, the boor, the serf, the villain, toiled in hopeless ignorance for his feudal lord and his exacting hierarchy.

If I were writing a book, instead of making a brief discourse, I might attempt to trace, historically, the rise and progress of agriculture and its progeny of arts. But we have neither time nor occasion now, for such a disquisition. Our present objects are practical: They concern our personal interests, our homes, our neighbors and our country. It is fair to presume that every man who takes a deep interest in the objects of our meeting, has taken the trouble to make himself acquainted with the leading facts which characterize our agriculture, and distinguish it, in a very marked manner, from the agriculture of Europe. How things were formerly there, we have briefly seen. Here they are wholly different. We have never had over us ferocious nobles or rapacious priests, to calculate how little and how mean would support the life of the cultivator, and take to themselves all the rest. Our lands have never been in the hands of the few, to be cultivated by the many, for the sole purpose of raising rents and tithes, but in the hands of a government of our own choosing, which can have no opposing interest. Our laws are free; our men are equal; our land is plenty; our soil and climate are almost infinitely various; and every man, who has the industry to till a field, has the ability to own it. With us, agriculture is not a separate existence, a peculiar interest; it is the nursing mother of all other arts, the controlling element of our manufactures and of our commerce—domestic and foreign. It pervades and influences all the relations of society, and is interlaced and combined with all the pursuits and interests of the people. And in this comprehensive character it is considered by the State government; for the charter, under which we have assembled, while it incorporates, by name, an *Agricultural Society*, provides expressly for the encouragement of agricultural, mechanical and domestic manufactures and productions.

Such, then, is the comprehensive character, the pervading influence and the inappreciable usefulness of agriculture. The practical pur-

suit of its object is a high calling. When well followed, it never fails to enrich the individual, to advance all other honest callings, and to give power and dignity to the commonwealth, by developing its resources and drawing forth its hidden treasures into active utility. And thus the intelligent farmer, in profitably serving himself, must needs serve his country. But this is not all. Its moral and intellectual advantages are hardly less than its physical. The labors of the husbandman are all innocent and harmless. Peace, order and protecting law are necessary to his success, and the daily habits of his life lead on to truth, justice and benevolence. All the influence of his profession lean to virtue's side, with a constant tendency to make him love his country and its laws, and to honor his God.

Having indulged in these general remarks, I desire now to draw your attention to some of the more practical parts of the subject. The great object of agriculture is production—the increase and multiplication of vegetable and animal life, whereby the farmer supports his family, the merchant and manufacturer are furnished with profitable employment, and the State is made rich and prosperous. How to accomplish this great object, and to make the most of the means at our disposal, is a problem, not for farmers only, but well worthy of the intensest thought of every sensible man, and especially of our statesmen, whose opinions exert a mighty influence for good or evil upon the interest of us all.

Three things are necessary to the perfect success of agriculture—land, labor, and learning. The two first are indispensable, for, without land and labor there can be no cultivation; and the third, learning, is no less necessary to the full development of the nobler art, and to enable it to fulfil its gracious mission, by doing the greatest sum of good to the greatest number of our race. Let us consider for a while the separate parts of this earthly trinity—and first:

The Land. Fortunately in this new country, it is easy to obtain good land at cheap rates. Every industrious farmer may, if he will, bestow the labor of his head and hands upon his own soil. He need not descend to the lower position of another man's tenant, nor submit to the draining process of contributing a large portion of his annual labor to swell another man's purse. And this I consider one of the immense advantages which a new country has ever an old. It is of vast importance, not to the individual only, but also to the public, that farming lands should, as far as possible, be cultivated and governed by those who own them. It increases the re-

respectability of the farmer and gives dignity to his occupation; it adds a strong motive to increased diligence and skill, whereby the annual crops are enlarged; greater care is used in the cultivation and preservation of the estate; damage by decay or accident will be repaired; orchards will be planted, and durable improvements made. In all these the temporary tenant feels no interest, and has no motives, material or moral, but to make the most of his transient bargain. But the man who cultivates his own land is animated by every good motive that belongs to the interests and passions of our nature. He prizes it because it is his own, for the present and for the future; he digs a well and expects to drink the water; he plants a tree and expects to eat the fruit. Every improvement in beauty and every increase in value is for the benefit of those whom, most on earth he loves. There he has laid his hearth stone and erected his roof—it may be a rough unhammered stone and a clapboard roof, but they afford warmth and shelter to his wife and children. To him it has become a sacred place, for it contains all the endearing ties and hallowed associations of home; ties and associations which, while they soften and purify the feeling heart, can hardly fail to sharpen the thinking mind, and strengthen the laboring hand. By these means he becomes a more valuable member of society, a better husband and father, a better farmer, and who can say that he is not made a better patriot, for the love of home is the beginning of patriotism.

Here, in the middle of the continent, with a sparse population, surrounded by unmeasured regions of rich soil, it is easy now for any industrious man to get as much land as he can cultivate. But it will not always be so. It is not so now in any part of Europe, and in some parts of the United States, and cannot be so in any densely populated country, whether old or new. A rapid change is going on before our eyes, in the condition of the public lands and the relation they bear to agriculture. Besides our natural increase, and the influx of population from abroad, there are artificial causes in operation, many and powerful, tending to give a nominal value to our lands, and holding out strong temptations to men of capital to engross them into their own hands, not for use, but as an investment for future profit. The admirable facilities for steam navigation on our great rivers, and the long lines of railroad, present and prospective, through all the rich regions of our interior country, have brought the most secluded sections into open view, and made the public domain, that rich inheritance of our national family, to a great extent, a

common subject of trade and speculation. And this tendency has been greatly enhanced by the action of the general government, in transferring large amounts of land to those who have no ability or wish to use them, except as an article of trade. Of this character are the military bounties, railroad grants, and the like. This is an evil which I suppose cannot be wholly avoided, because it is closely associated with the great and manifold advantages which we enjoy; and, while with grateful hearts, we receive the good, we must learn how to bear, with patient spirits its concomitant evils.

And yet, I venture the opinion, that by a wise moderation on the part of the people, and a sound policy on the part of the government, much of the evil might have been avoided in the past, and much of it may be corrected in the future. An opinion seems to prevail quite extensively, to the effect that the holding and control of the public lands by the general government is, in itself, an evil, and that almost any expedient is wise which tends to place the control in other hands, whether of States, corporations or individuals. I cannot but think that this is a very grave error. The principal reason assigned in its support is, that the public lands afford a constant subject of contention and strife among the members of Congress. Perhaps that is true. Perhaps some members do dishonestly strive to convert the people's inheritance into spoils of victory, and to degrade the system of its management in a scheme of electioneering. But that is their fault, not the fault of the subject matter about which they quarrel. A wise and thrifty farmer, who has more land than he can cultivate, commonly husband it carefully until his children are ready to settle it, and then establishes them around him, to their great advantage and to his own comfort and honor. And why would not the same policy be wise in a prudent and paternal government, which holds the lands only for the use of the governed? If it were the settled policy to preserve the public domain until some one wanted it, for actual use, and then grant it on cheap and easy terms, to all who would use and improve it, any man, at least for some generations to come, might rise to the dignity of a landholder, on the single condition that he will manure the soil with his sweat or fructify it with his capital.

The Labor.—Perhaps there is no branch of political economy so hard to be well understood, and about which intelligent men so widely differ in opinion, as labor and its wise and just application to the affairs of life. It is not my purpose to treat of it in that difficult and disputed view, but only to throw out a few suggestions as to the character and

amount of labor necessary to the success of our agriculture, and the possibility of making the amount of labor we have to go much farther and accomplish much more than we have been accustomed to see done.

Most of the mechanical arts have been methodised and disciplined. They have been subjected to settled rules, and their operations and results calculated so that it may be ascertained beforehand, with reasonable certainty, how much may be accomplished in a given time, by a given amount of labor. Not so with agriculture. The farmer—as far, at least, as concerns the raising of crops—is only a co-worker with nature. He may plow and plant with all diligence, yet he cannot ensure the increase; for that, after all, he must depend upon the spontaneous energies of nature and the blessing of a beneficent Providence. Yet he must work or suffer; for the wise proverb tells us that “the sluggard will not plow by reason of the cold, and therefore he shall beg in harvest and have nothing.”

Labor is so absolutely necessary to production, and consequent enjoyment, that it has become an axiom in social economy that nothing is intrinsically valuable but labor. If this be true, or if it approximate the truth, it becomes a high point of practical wisdom, to know how to apply labor to the best advantage, and I fear that many of our industrious farmers pay too little attention to this great consideration, and suffer accordingly. It is a waste of labor, and therefore a dead loss to the farmer, to attempt to do more than can be well done; and it is an abuse of labor to do that in thoughtless haste which needs to be done carefully, and with judgment and skill. In a new country like ours, the young farmer has a double task to perform. He has to make his farm before he can make a living by tilling it. And hence the importance in selecting his locality, of giving good heed to the character and condition of the land, and its adaptation to the ability of the individual, and the branch of farming he intends to follow.

The cost of making farms is, of course, felt, and in a general way, appreciated by those who make them; but I am inclined to think that many of the best farmers in the State would astonish themselves if they would take the trouble to make an exact estimate of the expense, and put it down in writing. Allow me to draw your attention to a few of the chief items.

[1. *The clearing of timbered land.*—If the forest be heavy, the work cannot be well done, ready for the plow, for less than \$12 or \$15 per acre. And then, if the timber be of a durable nature, such as oak or walnut, you

will be plagued with about five per cent. of stump for many years, always in the way, crooking your rows, baulking your teams, breaking your plows, and fretting your temper. All this expense and trouble belong to the timber, and not to the land and is just so much in addition to the cost of making a prairie farm, for the prairie sod can be broken and put into tilth easier and cheaper than the forest thus cleared. I leave it to men of more practical knowledge than I have, to say whether or no a forest farm, once fully made, is really worth so much more than a prairie farm, as to justify this apparent waste of labor, to say nothing of the waste of timber, which is an important consideration in a large portion of our State.

2. *Fencing.*—I read lately in a newspaper a well written article, in which it is asserted that the fences of the United States cost more money than all the houses, including public edifices of every sort. At first I was startled and wholly incredulous, but the statement set me to calculating, and now, in the absence of precise data, while I cannot affirm the truth of the assertion, I dare not deny it. A Federal township contains 23,040 acres of land, which being a square of six miles, may be enclosed as one field by a fence twenty-four miles long. If you wish to enclose the same quantity of land in separate fields of a section, or 640 acres each, you must make 144 miles of fence—if in half sections, or 320 acres each, 216 miles of fence—if in half quarter sections or 80 acres each, 532 miles of fence; and if in quarter-quarter sections, or 40 acres each, 575 miles of fence. Probably a majority of the cultivators of Missouri soil have each enclosed 160 acres or less. Let us assume a quarter section as the average quantity, and I think it fair to assume also, that the interior fences, including yards, gardens, farm fences, &c., will amount to half as much as the outside enclosure, and then you will have for every 23,040 acres (the contents of a township) the enormous quantity of 420 miles of fence. In estimating the cost of the fence, I do not claim to be precisely accurate.

Every good farmer will have good fences, if he can, for he knows that if his fences be mean and insecure he will be sure to pay a very heavy penalty in damaged crops, breachy cattle and quarrels with his neighbors. From the best information that I can get, I come to the conclusion that good fences cannot be made at less than the average cost of one dollar the rod or perch. On this estimate, the cost of enclosing 23,040 acres (the contents of a township) in farms of a quarter section, or 160 acres each, with the usual amount of interior fences, will be \$134,400; while the

cost of fencing a whole township, in the same manner and at the same estimated rates, will amount to only \$11,520. And thus it is apparent, that in the single article of fencing, the difference between the cost of making one large farm of a whole township, and making 144 farms, of a quarter section each, amounts to the enormous sum of 122,880. And this is a clear saving, and operates as a direct premium in favor of large farming. I do not say that it would be desirable or possible for all our farmers to operate on so grand a scale, nor that the plan would suit all parts of our country, or be convenient and proper for all, or perhaps any, of the minor productions, of rural labor. But as to the great staples of grain, grass, and animals, not intended for home consumption, but for distant markets, the temptation is so strong, that I have no fear in predicting, that in the course of a few years, we shall see many farms of at least a township in extent. The diminished cost of fencing is not the only economical inducement. The cost of preparation and outfit, in implements, animals, and shelter, is in about the same inverse ratio to the magnitude of the establishment. And even in the actual working of the soil, the saving in long rows, instead of short ones, is very great. Let me prove this by a practical demonstration. Suppose I wish to plow a field one thousand yards long and one hundred yards wide. If every furrow cut a foot in plowing crosswise, there will be three thousand furrows, and lengthwise only three hundred. Of course, I must turn at the end of every furrow, whether long or short, and unless there be some cogent reason to the contrary, I will certainly plow the long way, for thereby I shall save all the time and labor which otherwise would be wasted in turning my team and plow two thousand seven hundred times—a pretty heavy item in breaking a lot of only twenty acres.

The part of our country commonly called the Northwest, (including all of Illinois and the north half of Missouri,) is admirably adapted to this kind of large farming. The prairies are broad, rich and smooth; there is no poor land, and very little too wet or too rough for easy culture. No forest, on which the farmer is required to waste, at once, his labor and his wood, in the clearing. Add to all this the rapid advance of inventive art, by which the weakness of the human frame is substituted by the power of wood and iron, and machinery is made to do a vast deal more work than could possibly be accomplished by manual labor. Already our small grain and grass are out and threshed by machinery. But this is not the end; it is only the beginning of labor-doing enginery in the great art.

McCormick is not our only benefactor. Inventive genius will not die with him. His own valuable machine will be improved and perfected by himself or another; and other machines, perhaps, far more effective, will be found, when the occasion calls loudly for them. Already we reap and mow by machinery, and can it be that the restless and progressive mind of the country will consent to stifle its ruling passion and stand still, before it has learned how to plow and sow by the same means. No, never. One thinking head can do more work than fifty thoughtless hands. Genius and art and enterprise belong to the country, and are necessary to the full development of its vast capabilities; and trusting in the good providence of God, I confidently expect that they will be called into action, as soon and as fast as our occasions shall require their efforts. Who that has seen the steamboat, the railroad, the telegraph, the reaper, the threshing, and the sewing machine, can doubt that the broad plains of the West will be plowed, and sowed, and reaped, and mowed by machinery, as soon as the country shall be in condition to need so great an accession to its productive labor. When that time shall come, (and I think it is near at hand, and that we ought to be preparing to meet it,) the tolling farmer will be relieved from much of his severest drudgery and the very horses and oxen will share in the gracious respite. For, assuredly, steam (or possibly something better) will be harnessed to the plow and made to drudge for our daily comfort. Let no man be alarmed at so vast a new creation of productive labor, lest it should injuriously interfere with the occupations of men, by diminishing the profits of their work, or throwing them out of employment. There is no danger of such a result. In all the mechanic arts, in the power of locomotion, and in mechanism generally, the effect of work-doing engines has been to increase the demand for human labor, to multiply production and enjoyment, and to send down comforts and luxuries to the lower strata of society. It may induce many to change their vocations, by turning to other engagements more pleasant or more profitable, but it will deprive no man of employment who is willing to work. Success in agriculture needs and produces manufactures, commerce and transportation, and all these will require an increased number of hands. New crops will be introduced, such as silk, wine, fruits in variety, and drugs and dyestuffs without number; and perhaps even, the South African sugar cane may be found as well adapted to the middle and upper regions of the Mississippi, as the tropical cane to its delta. But above all, the great staples of the

planting States—cotton, sugar, rice, tobacco—flourishing and prosperous as is their present condition, stand in urgent need of more hands. The labor in these staples is performed chiefly by slaves, and to me it is quite apparent that there are not half as many of them engaged in the work as might be profitably employed. This fact—the great want of labor in that department—is proved, I think, by two circumstances: 1. The high price of slaves in the planting States. I am credibly informed that an able young negro man will bring from twelve to fifteen hundred dollars, and that a first-rate crop hand, is usually hired for about two hundred dollars a year. Nothing but necessity and pressing lack of labor can justify such prices. 2d. The immense quantity of good land lying idle and useless in the Gulf States, while cotton and sugar are commanding high prices, is to me conclusive proof that labor is badly wanted, and that twice or thrice as much might be well employed as can be obtained under existing circumstances. So far then from any injurious effect being likely to result from the increased production of provision and animals, and by means cheaper than human labor, it seems to me that its natural tendency must be favorable to all the interests of agriculture, and is nothing more beneficial than in relieving the necessities of the planting interest, by supplying it with the laboring hands which it stands so much in need of—that is, the slaves heretofore and now employed in the less profitable business of raising grain, grass and cattle. This result, I think, will certainly follow, but this alone may not be sufficient to fill the aching void. None can be had from abroad, for the law forbids importation; and the natural increase is too slow to answer the demand. The supply must come from other departments of husbandry which can spare the slave labor. Hemp and tobacco, though properly classed with the planting interest, flourish best in temperate regions, North of cane and cotton. As to hemp, I suppose it is as easy to raise the plant, as to raise wheat, but the handling and preparing of it for market, is said to be one of the most laborious operations in American farming. Heretofore all its work has been done by hand; but this state of things cannot long continue; wood and iron will be substituted for the hands of men, and the hemp crop, like the small grains and grass, will be cut and handled and dressed for market by machinery. Then the hemp grower will be able to enlarge his crop so as to answer all profitable demands, and may still dispense with a large portion of his manual labor, which will be sure to find employment in the service of cotton and cane. The culti-

vation and preparation of tobacco is all done by hand, but it is comparatively light work, in which women and children, as well as men, may be employed. And hence it is probable that a large amount of voluntary labor will engage in that culture, whenever it is found to be more profitable than former occupations. This process, which, I think, will grow from year to year, will supersede many slaves now engaged upon tobacco, and they, like their brethren of the hemp crops, will go where they are most needed, to the fields of cotton and sugar.

There is nothing earthly so important to be rightly understood, and wisely and practically applied, as the great and complicated subject, Labor. It pervades society, making or marring, as it is well or ill-governed, the comfort and happiness of individuals, and the strength and glory of nations.

I have not attempted to treat the subject in detail—for that were impossible in such a discourse—but only to touch upon some of its corners and outlines, and to throw out a few hints, in order to put you upon the track of your own better thoughts, which you can follow out at leisure, to their legitimate conclusions.

The Learning.—There was a time when a common error prevailed, to the effect that no learning is necessary to qualify a farmer for his trade—that knowledge, which in all other callings, and in all other phases of human life, is power, is of no use in farming. Those, if any, who now entertain that opinion, so degrading to agriculture and so stultifying to its followers, ought to be pitied and forgiven, for the idea springs from that mental darkness and moral obliquity, which are greater misfortunes than faults. This Society was formed for the very purpose of collecting and diffusing knowledge; for bringing together and comparing (for mutual instruction and profitable learning to us all) the various productions of the soil and of the mind—the combined results of the land and labor of the State, controlled and directed by an enlightened intellect. The members of this Society need no argument to prove that knowledge, art, science, a thorough cultivation of the mind, are all necessary to enable a man to cultivate the earth to the best advantage; to understand and appreciate all the elements of nature, which are his co-workers, his partners in business, striving by united efforts, to bring about the great results he aims at. And how can he be a valuable assistant, a profitable servant in the great laboratory of God's own chemistry, vegetation, unless he knows something of the glorious art, which would teach him to understand the soil he tills and the air he breathes

and how to separate or combine their component parts, to neutralize a bad ingredient or stimulate a good one into fruitful action. And how can he wisely select and profitably use the implement and machinery necessary to his daily business, if he be wholly ignorant of mechanical science? In short, I venture the opinion that there is no art or science befitting a gentleman to know, which may not be made, in some form or in some degree, subservient to the interest and the pleasure of the agriculturist. The whole encyclopedia is auxiliary to his noble vocation. Agriculture, as a separate department of industry, is by far the most important of all, and ought to exert a powerful influence, in forming the texture and tone of society, and in giving direction and force to the measures of government. Its members are not merely and simply tillers of the soil. They are citizens, also, with the same rights and duties that belong to men of all other callings; the same general interests; the same hopes and fears; and the same honest ambition to rise to the high places of influence and power, and to be first among their equals. Then, how does it happen, that so few practical farmers are found in the high offices of government, exerting a personal influence in so moulding the measures of public policy, as to encourage and promote the great interest to which they are particularly attached? How does it happen that nine-tenths of the great public offices are filled from the, so called, learned professions? That fact is a fault in the actual working of our political machine—a great fault that there should be an apparent necessity to choose men from a few small classes only, to rule over the many. But not the fault of the members of those classes. They do right in acquiring as much knowledge as possible, and in fitting themselves, as well as possible for the eminent places to which they may honestly aspire. If any one of you ask me who, then, is in fault, I answer here, as Nathan answered David, "thou art the man." It is the fault of the farmers. They, as a class, condescend to a low place, and agree to remain uneducated and comparatively ignorant. And believe me, my friends, in the assertion of this affirmative truth, that whoever consents to ignorance, consents also to its separable companion, imbecility. But this state of things is coming to an end. The organization of this society is one among a thousand proofs, that the agricultural class, embracing as it does, the great body of the people, is determined henceforth to maintain its own rights, and fulfil its duties to the country, by self-improvement, by the culture of the arts and sciences, and by assuming the position in society, and exercising the influence

admiral ed in art has all of the old lands

once in government, which belongs, of right, to its members, its wealth, and its incalculable usefulness. The means and the modes of accomplishing this great end, lie all open before you. They are too many and various to admit of discussion or even statement, now and here. Domestic instruction, common schools, academies and colleges, the habit of private reading for self-teaching, and of practical experiments, for the demonstration of the truth or falsehood of theories; these are some of the infinitely various means by which the great object may be attained. When these and the like means shall have been fully and fairly tried, agriculture will take its proper relative position, and exercise its just share of influence in the country, and then its members will rejoice in the consciousness that they are as strong in knowledge as in numbers.

GRASSES.

BY PATUXENT PLANTER.

We clip the following article from the "American Farmer," published at Baltimore, Md. Although the article was designed for a different section of the country, yet it is equally applicable here. The subject of grasses is an important one, and our readers are doubtless anxious to be informed upon the best kinds, and the varieties best adapted to their soils:

It is evident to the most inattentive observer of agricultural operations in the lower counties of Maryland, that the pastures are poorer, and the grasses generally less productive and luxuriant of late than former years. What is the cause? The lands have improved and other products, per acre, have increased, with the advantages of an improved system of cultivation. Is it that they have "tired" of the clovers and other kinds of foreign seeds? Have the lands turned "Know Nothings?" I think not, because the natural or native grasses, such as blue-grass, herd's, white clover and woolly head clover do not now spring up and grow spontaneously with half the vigor and rapidity that they did every where when I was a boy. Before the introduction of English clover and timothy, the clovers both white and yellow were abundant on stiff lands, and the woolly head clover was very rank and luxuriant on sandy soils, affording after the first of June, really rich and abundant pasturage; but it is not so now-a-days. They have been forced to give place to the improved sorts of imported grasses, and they, in their turn, have, it would seem, exhausted the soil of such quali-

ties as serves for their sustenance, so as to flourish and yield a crop remunerative of the outlay in their production. In view of these facts, ought not other grasses be sought after and made to take their places for a few years. What these grasses shall be, time and experiment must determine.

Timothy sown in September with rye, and late in October, even in November with wheat, has lately proved valuable in this region, affording fine pasture after wheat harvest, and the next year a fine crop of hay. This grass should be sown at the rate of two gallons per acre even with clover, over every acre seeded with clover. When sown alone, half a bushel per acre to ensure a good stand. Every farmer could with little trouble save his own timothy seed.

Orchard Grass does well on rich, stiff clays, and should be mixed with clover.

Red Top is indigenous, and succeeds on moist low grounds, and stiff-clay up land.

Italian or Perennial Rye-grass, is well recommended by yourselves, and commands the highest encomiums from numerous English writers. It is said to be capable, if well manured, to yield two crops of seed and one cutting of hay, or for soiling, and then furnishing rich pasture for at least two months in the year. It should be extensively tried.

Iverson Grass. This grass, named after its discoverer, and introducer of its qualities to the American Agriculturists, is destined to immortalize him. As a young though highly intelligent and practical farmer remarked, on seeing its growth, "the ultimatum in grazing, and rearing stock, has at last been found out; meat can now be raised to an unlimited extent with *"Iverson Grass"* and the *"Little Giant"*—no matter what amount of stock a farmer keeps, he need have no anxiety about provender if he sows Iverson Grass and owns a Little Giant. I have no doubt as to its vast value. As far as my experience goes, Mr. Iverson did not say too much about it, when he said it was a perennial evergreen, very rapid in its growth, yields abundantly both seed and hay—affords the best pasture; no wet, or drought, or cold, or heat affects it detrimentally. I procured last summer one peck, and sowed it the second week in October, on land which had been worked in 1852 in tobacco, in 1853 in wheat, and tobacco in 1854. After the tobacco was out, the land was ploughed up, harrowed and furrowed with a very small plow, one foot apart, the seed sown, a brush run over the land, and a roller passed over it. This land had no manure applied to it for either crop, and was only a tolerably rich piece of ground. It was a light loam. It was one quarter of an acre in a lot of three acres, two of which were in

wheat, and the rest occupied with locust trees growing very thick. On the 1st of December I put on the lot a colt and calf, where they remained until the 17th of April. The grass kept green as the wheat all winter. It was observed by many that the colt and calf preferred the grass to the wheat, which they hardly touched. Two gentlemen, who had laughed at my paying \$5.25 per peck for it, measured it about the 25th of May, and found it 26 inches high, having made that growth in less than 40 days, during which time it had not had rain—and it was not an inch high when the colt and calf were removed from it. I only saved three bushels of seed, but feel confident I could have saved twenty bushels if I had begun in time, and attended to it,—but I was otherwise occupied, and did not know it was ripe, until a hard rain, and high winds after, had caused it to lose nearly all the seed. As it was sown on a farm distant from the one on which I reside, I did not pay that attention to it, which some of my mistrusting friends did, and who are so delighted with it that they have ordered all the seed I can spare. I fully expect in September to get a large crop of seed, which will betwo crops. If it will give two crops of seed, there can be no doubt that 100 bushels of seed can be raised per acre per annum. From the appearance of the seed I cannot come to any other conclusion than that it is as valuable food for stock and poultry as *oats*.^{*} I view this grass as one of the wonders of the age,—and must revolutionize farming to a great extent, if further trials sustain the past experience in regard to it; especially will it become the greatest of renovators if the culture of the pea be combined with it, as is so strongly recommended by Mr. Iverson. This is the month (September) for sowing grass seeds, and it is earnestly hoped that our friends will generally experiment with the various newly introduced grass seeds, and good must come of it. Let us not hold back; let us remember what the introduction of red-clover did for our fathers, and how slow they were in profiting by it, and how they repented not having used it at an earlier period in their system of farming, and while we recollect these facts, let us profit by the remembrance, and go earnestly to work in experimenting this autumn, in the effort to secure some grass that will yield us more herbage and forage; will be more certain to live, and less liable to be destroyed or injured by our variable climate than clover; for it is apparent we can

^{*} This is a suggestion of my own; never having thought of it until this present writing. If the nutritive qualities of the seed be found to be thus valuable, it will take the place of *oats*, becoming a perennial oat crop, at the rate of 100 bushels per acre. What a gift it will be, should it so prove!!

no longer with safety rely upon it for either of these purposes, or for fertilizing the soil. We must either resort to new seeds or change our system of rotation, so as to keep the land for a few years clear of clover, when it will no doubt again succeed, as has been clearly proven by such a course by one of my neighbors, who is an excellent farmer.

The Mismanagement of Woodland.

Compared with European skill in the management of forests and woods, our practices appear equally wasteful and barbarous. We neither take care of the valuable timber which nature has so liberally supplied to this continent, nor plant the seeds of forest trees to meet the growing wants of a rapidly increasing population, while the woodlands of the whole country are scourged by the unrelenting axe and by consuming fire. Young cattle, and other stock, lend no feeble aid in the work of destroying the undergrowth of woods, which is indispensable to supply the places occupied by old trees that must soon fall to the ground. In short, the mismanagement of woodland is one of the most noticeable defects in American agriculture and public economy. We shall soon have a population of fifty millions whose system of railways, inland and foreign commerce, love of fine houses, furniture, carriages, and all other articles of luxury and utility, made in part or wholly of wood, will create an almost unlimited demand for lumber and timber in the United States.

For several centuries France has contained a dense population, and has comparatively little coal for fuel. Hence, both experience and science have co-operated to develop the best methods of preserving forests, and the wisest processes for felling trees, (whether to cut all the timber at one time, or to fell only the old and matured trees,) and at what season of the year trees ought to be cut to secure the greatest durability to the wood. It is the practice of the French people not to cut off their woods oftener than once in twenty or twenty-five years, and by law, when cut, the owner is required to cut the whole smooth, with the exception of a very few trees which the officers of the government had marked for a larger growth. Experience in this country fully sustains the wisdom of allowing the young growth the full benefit of sunshine and the natural resources of the soil, uninjured by the shade and great draft on the land by more advanced and much stronger plants. To cut down trees in a scattered manner, as do most Americans, is like attempting to harvest and to grow a crop in the same field and at one and the same time. Many have planted

acorns, chestnuts, and other seeds, in thin, open places in woods, in the hope of obtaining a valuable crop of young forest trees. It would have been as wise to plant an apple orchard in the woods as the seeds named, expecting a healthy growth. To obtain the maximum organization of wood on any given area, from year to year, is a problem in vegetable physiology and forest-culture that few have studied in any nation, and perhaps fewer in this than in any other equally advanced in civilization.

The Hon. John Welles, in an able article published in the *Massachusetts Agricultural Repository*, recommends cutting hard-wood trees so soon as they reach the age of forty or fifty years. He says: "Though trees may shoot up in height by standing longer, yet the period of the most rapid vegetation is mostly over, and by allowing them to stand longer, much of the undergrowth is necessarily destroyed."

Let us assume that one has just cut off ten acres of woodland in winter, and that it has sprouted finely in the spring. Dividing the next forty years into four decades, in which will the growth of new wood be the largest? We believe in the second and third, and not in the first nor in the fourth. If this opinion is well-founded, then forests should be cut off, if kept for firewood, once in thirty years, to give the maximum of timber to the acre. The quantity in cords, or tons of seasoned wood, depends mainly on the degree of fertility of the soil—some land producing three or four times more than an equal area of other land.

It is injurious to the growth of timber to remove the leaves from woods, as bedding for hogs, cattle, and horses, as is often done to increase the manure heap, and sustain fruitfulness in cultivated fields. It is true that leaves may be worth more to aid in forming annual crops of grain and hay than a crop of wood to be cut only once in twenty or thirty years; but to grow a crop of forest leaves every year, and remove them from the soil, is a certain process, ultimately to impoverish it. In Europe, great care is taken to prevent such an injury to the land.

Where trees are scattering, some advantage may be realized by cultivating woods grass, or blue grass, among them. This, however, is to make forest-culture secondary to grazing; and where one has a good deal of land in woods, the two interests may be to some extent advantageously combined. When the growth of wood or timber is a primary object, no stock of any kind ought to run at large among the trees, to eat and kill the young growth.

According to our experience, chestnut and

locust give the earliest return from planting, of rail-timber and fence-posts. On our farm in the District of Columbia, these trees grow with great rapidity. Where fencing is dear and scarce, we recommend the black and yellow locust, and chestnut, as quickly-growing and lasting wood for the purpose named. In open fields, insects attack and destroy locust trees, but they seldom do so when surrounded by woods.

Chestnuts should be planted as soon as ripe, and before the nuts become dry, in rich loam well cultivated. All kinds of trees do best on good land, and generally pay for any extra pains one may take to promote their welfare.—*Genesee Farmer.*

From Life Illustrated.

Advantages of Subsoil Plowing.

EDITOR LIFE ILLUSTRATED.—In your issue of Sept. 8th I see an article headed as above. The advantages arising from subsoiling are far different from those there set forth.

It is true that alumina—not "*alumen*"—is, to a very slight extent, food for plants in all probability—at least many of the best agriculturists claim it as such. Whether it is or not it matters little, as the amount thus used is very slight and may be furnished by the majority of tillable soils without any special addition of this material, as it is the chemical basis of clay. The *real* advantages of subsoiling are first to so deepen the soil as to present a greater surface for the travel of roots, and consequently prepare more food within reach of the plant.

Second, allows roots to penetrate deeply enough into the soil to reach a moist substratum during drought.

Third, in wet weather allows water to pass down and filter away more rapidly into a porous substratum, if such exist under the surface soil.

Plowing an additional depth of three or four inches is *not* subsoiling, no matter whether it be performed with an ordinary plow or a regular subsoil plow. Subsoiling is done by first turning a furrow with the ordinary surface plow; then following in the bottom of the same furrow with a plow—made expressly for subsoiling, running to full depth—say from twelve to eighteen inches below the top furrow, or in all twenty to twenty-four inches from the surface of the soil, lifting and loosening the soil, but not turning it over. This is subsoil plowing, and its effects on any but very wet or light, sandy lands are admirable and not doubted by the mass of intelligent farmers.

Subsoiling is an expensive operation; therefore, unless well done, should not be attempted. Partial subsoiling may be done by run-

ning the lifting subsoil plow in the bottom of the drill for corn, or running it at full depth half way between two rows of corn or other hoe crop at the first or second cultivation. This may in part preserve a crop from the evils of drouth, and may be appealed to where time will not permit the more thorough methods to be performed.

Subsoiling enables us to make the mechanical or physical conditions of the soil better, but it does not add manure. By presenting new surfaces in the soil, which have not been before robbed of their plant-food, the amount of crop is increased, but distinctly at the expense of the soil. Therefore, without additional care in manuring, we shall, by deeper plowing, subsoiling, etc., only hasten the exhaustion of soils—pursuing the same system which improved agriculture boasts of doing away.

Should your space admit, I would like to continue this subject at some future time. It is of the greatest importance that farmers should use the subsoil plow, and use it rightly.

Blood Stock, What is It?

Many farmers have most curious notions about the meaning of the phrase "Blood Stock." Many have an idea that it must be imported stock, and held at a high price, because it has been brought across the ocean.

But in England there is a wide distinction between what is called blood stock and the common stock of the country. Certain breeders of stock have been extremely nice in regard to breeding.—They have selected from the common herds of cattle the very best they could find, and have kept them apart from the common run of cattle, casting off all the inferior individuals that often show themselves in the best herds.

By pursuing this course for years in succession a race is produced superior to the common run of cattle—and at length this race becomes so perfect that you can place much reliance on the progeny.—Different courses have been pursued by stock breeders in England—but generally the aim has been to produce large animals, and such as will fatten early, regardless of their merits as milkers.

The short-horn Durhams meet the views of those who pride themselves in the growth of their largest animals, and

such as will fatten at three or four years of age. These cattle are said to fatten at less expense also than the promiscuous herds of our country—but as reliable milkers the full blood Durhams have failed to give satisfaction to purchasers.

But a prejudice exists against what is called "blood stock" that is, imported stock, and the question is often asked—why is not our own native stock as good as any that can be imported? We have cows of no particular breed that will excel the general run of imported cows, and why shall we not rely on them in preference to what is termed "blood stock?" New we have no idea that the farmers of Britain are the only people capable of producing "blooded stock." They have the lead in this business, and to them we look for information in regard to results—but we are not bound, hand and foot, to the opinions of foreign breeders.

Let us examine this subject fairly. Is it best to breed promiscuously and pick out of the mass production the best looking individuals—or is it better to endeavor to rear a race from the most noted milkers, and keep that race apart from the mean animals which are often reared as farm stock?

A drover who goes into the interior to buy cows will prefer such as are bred by an old farmer who has long been in the practice of raising his own calves, and breeding from the best of his cows. A farmer who has pursued this course for twenty years or more, has now in fact, "blood stock" of his own production, and can calculate with considerable confidence on the qualities of the calves or young cattle he has produced.

By pursuing this mode we can rear as good blood stock as any foreigner that ever lived. Time, practice, and strict attention are needed to come to the result which foreign breeders have come to in the improvement of their herds. We can have as good cattle as any that have been produced in England if we will have patience and continue long in the right course.

It often happens that an individual cow of no particular breed, will yield more

milk and butter than the average of blood stock. What of it? Will her progeny do the like? If we cannot rely on her progeny we cannot account her as of any great advantage to the public, though her owner may have made profits out of her.

Drovers go annually into the interior to by cows to supply a demand of people who live on the sea board, or near large towns where young cattle cannot be raised without great cost. A shrewd drover picks up 30 or 40 of the best cows that he can find in Vermont or in Canada.

Well, he sells to those who cannot afford to rear calves. The purchasers are benefited by this course of trade, but the State is not advancing by this course of traffic. The best lot of cows is transferred from Vermont to Rhode Island—but not the least advance is made in the improvement of stock. Rhode Island still continues to make veal of all the calves, and Vermont continues to rear all good and bad.

And yet we hear croakers declaiming against blood stock, or select stock, because a bastard individual is sometimes found to prove superior to the average of blood stock or legitimate stock.

Imported stock, and all blood stock should be judged by its real merits. If Americans will pay the same attention to breeding which foreigners have done, they can without doubt, rear as good animals as any of foreign production. Will they not make the trial?—*Massachusetts Ploughman.*

How to Move a Sullen Ox.—"Did you never observe," said a plain man, a friend of ours, a few days since, as we were driving a dog out of the cow pen, to prevent his taking refuge behind us—as the cows took it by turns to chase him over the lot—"did you never make friends with a dog?" "Often." "Well, the best way you ever tried to make steers rise when they get sullen, and lie down, is just to bring a dog and drop down on them. It will make them jump up when nothing else in the world will." We seized the hint at once for the benefit of our friends who own such pests as obstinate oxen, and give it to them now. We believe there is no antipathy so universal and inveterate as that of cattle against dogs, and it strikes us that when all other means fail, that will answer.—*Southern Planter.*

Nov.

Agricultural Circular.**Agricultural Division of the Patent Office.**

Another circular has been issued by Mr. S. I. Shagert, Acting Commissioner of Patents, solidifying aid in the collection of statistics on agriculture, it being one of the duties of the Patent Office. No information is desired except that which is strictly reliable. Another object sought to be attained by this office is the introduction and dissemination of new and improved agricultural products, and, says the circular, any packages or parcels which may be committed to the care of this office will be received and distributed with great pleasure, "whether they consist of the seeds of cultivated plants, either of native or foreign growth, or those of our natural grasses, fruits, wild flowers, forest trees, or of the cuttings or sale of anything which may be deemed worthy of cultivation." The following inquiries are intended to direct attention to certain points on which information is desired. It is hoped, however, that the mention of these will not exclude any other matters of general interest that may suggest themselves; but it is desirable that all answers be limited to matters with which the writer is fully acquainted, even although they may relate only to a single subject:

Domestic Animals.—What classes of animals can be raised to the best advantage in your section? Cost of rearing, and value at various ages? Cost of transporting each to the Atlantic or Gulf markets alive, by canal, steamboat, railroad, or on foot? What breeds are the most serviceable for labor, milk, flesh, or wool? Have you any imported or blood animals in your vicinity? If so, state the number, breed, history and pedigree, if known, and the effects of crossing, if any, on your common stock; together with your mode of feeding and management.

Animal Products.—What is the cost of production and market value, in your vicinity, of wool, silk, wax, honey, cochineal, milk, butter, cheese, eggs, beef, mutton, pork, hams, lard, oil, hides, tallow, pelts, &c? What is the cost per hundred pounds of transportation, by canal, railroad, or otherwise, to the Atlantic or Gulf markets?

Manures.—What manures are most in use with you, and which the most valuable for special crops? If guano, bonedust, phosphate, super-phosphate, lime, gypsum, charcoal, ashes, fish, muck, or any other valuable fertilizers, are employed in your vicinity, state the cost, modes of application, and their effects upon the respective crops to which they have been applied. The result of any accurate experiments would be desirable, especially as connected with any of our great leading

staples—cotton, tobacco, hemp, flax, wheat, oats, rye, barley, rice, potatoes, or Indian corn.

Agricultural Products.—What crops can be cultivated to the best advantage in your section? The best modes of cultivation? The maximum and average yield of each, and the smallest yield that will pay expenses? Have you any established rotation of crops? What plants are cultivated for the purpose of plowing under as a manure? Have you any remedies against the diseases and insects that infest your crops? What are the best modes of harvesting, storing, and preparation for market? What is the cost of production and market value, in your vicinity of the various kinds of grains, roots, hay and fodder, cotton, hemp, flax, hops, sugar, tobacco, &c.? What the cost per hundred lbs., or per bushel, of transporting each product, by canal, railroad or otherwise, to the Atlantic or Gulf markets?

Special interest is felt at the present time in those plants which are employed in the manufacture of cordage, clothing, &c.—such as cotton, hemp, and flax. Are any of these crops profitably cultivated with you? If so, have you any improved variety, new modes of cultivation, harvesting, or preparation for market?

Market and Kitchen Gardening.—Please to give the names of the best varieties of garden vegetables, the usual times of sowing, periods of maturity, yield on a given space of ground, and their market values. What vegetables are brought into your vicinity from the North, South, East, West, or from beyond sea; at what seasons; and at what prices?

Fruits, Wines, &c.—What varieties of summer, fall, and winter fruits are cultivated with the best success in your section? What kinds are attacked by blight, mildew, or insects, particularly injurious to their perfect growth? If any, what remedies have you against their attacks? Have you any improved modes of cultivating fruit, harvesting, storing, and preparing it for market? What is the cost per bushel or barrel of transporting those kinds not perishable to the Atlantic and Gulf markets by canal, railroad, or otherwise? What is the current value per bushel or barrel of each kind in your vicinity? Is the grape cultivated with you for table use, or with the object of making wine? If for either, can you communicate any information relative to its name, history, cultivation, preservation, or the manufacture, cost, and market value of American wine? What fruits are sold in your vicinity grown at the North, South, East, or West; at what seasons, and at what prices?

Live Fences.—What trees or shrubs form the best live hedges in your vicinity? How

long have such hedges, if any, been established? Are they seriously affected by frost or drouth? What was the cost per rod, the annual expense of trimming, and your mode of management?

Please to treat of each subject under a distinct head, after the manner of the arrangement of last year's report; and if convenient leave one side of your manuscript blank.

In order more effectually to carry out the objects of the agricultural department of this office, it is designed to form a cabinet of seeds, to embrace all the principal varieties, not immediately perishable, cultivated in the different countries of the globe.

The object of issuing the present circular is to procure a complete collection of the various kinds of *Indian Corn* growing within the territory of the United States. Should it be in your power to contribute to the formation of such a collection, you will confer a favor in forwarding by mail, as early as the 15th of December next, from four to six perfect ears of each variety, cultivated in your vicinity, labelling each kind, as far as practicable, after the following manner:

Eight-rowed yellow or King Philip corn, grown by Robert Lambrey, Lake Village, N. Hampshire.

Planted May 1, 1854.

Harvested Sept. 6.

Distance of hills apart 3 feet by 4.

Number of stalks to each hill, 4.

Estimated yield of dried shelled corn per acre, 100 bushels.

Weight per bushel of dried grain, 58 lbs.

Number of pounds of dried ears required for a bushel of grain, 70.

Product of grain of 100 dried ears, 40 lbs.

In addition to the above, any information you can give relative to the application of manure in the cultivation of any variety, or the amount of fodder produced to the acre, will be thankfully received.

Each variety may be done up separately, with a portion of the husks or shucks left on the ear, in several thicknesses of strong paper or cloth, and addressed, *U. S. Patent Office, Official business, Washington, D. C.*

No packages can be transmitted by mail when enclosed by wood, glass, tin, or other metal, as all such substances are prohibited by law.

POULTRY UNDER PLUM TREES.—We have been presented with some specimens of very fine plums raised in this city. Until last season, the fruit upon these trees was very imperfect, owing to the ravages of the curculio, but for this season and the past, the fruit has been good, owing, undoubtedly, to the fact that poultry has been kept under the trees. It is an experiment easily tried.—*Hartford Cour.*

Wool Growing South.

There is no branch of farming which, in proper locations pays so well as wool growing. The proper location consists of a dry hilly country, where the climate is moderate, and the verdure plenty, and nutritive. Sheep will thrive in almost any climate from the equator to the pole. But that which best suits them is a temperate one. They do not flourish well on rich bottom or interval lands, for a moist or rich soil is fatal to them. But upon rolling, or hilly lands, or even moderately mountainous, in a warm climate, they are beyond all doubt the most profitable stock a man can raise. The writer of this has been connected with the business for more than thirty years, and has not yet seen a year when the sheep have not given a better profit on the capital invested than any other stock upon the farm. And yet we have to provide winter feed for about seven months out of the twelve of each year.

Sheep to be profitable require care, but it is a kind of care that is neither laborious or expensive. But there is one great evil in the way, in all regions where sheep have not been kept, and that is depredation by dogs. That evil can be remedied by a law taxing dogs, and making it legal to destroy any one found at large without his master. In this State dogs are taxed, for the first one, 50 cts., any additional one to the same person, one dollar, if a bitch, three dollars. And if the tax is not paid, then, any person is at liberty to kill it in any place. Besides the owner is held responsible for any damage his dog commits. In this way, and with a free use of poison, dogs are not troublesome with us. The tax is kept as a fund to pay for sheep which are killed by dogs when the owner cannot be found, or is unknown.

It is a very great marvel why so many dogs are kept. In most instances they are of no use, while the expense of their support is equal to that of ten sheep. But I notice by the census of 1820, that there has been a gain of Sheep in your State, in ten years of fifty seven thousand. The number in 1840 was 538,279, while in 1850 it was 595,549. This is a good sign, for although the gain is not large, it still shows there is a perceptible increase. It is a significant fact, and well worthy of notice, that while sheep have decreased in nearly all of the old Northern States to the number of millions, they have increased in nearly every Southern State in quite perceptible numbers. The decrease in the North is owing to the denseness of population, and the diverting of a greater breadth of land to making butter and cheese, and growing of grain. The multiplication of railroads has made grain growing and the dairy, more profit-

able than wool growing, unless the growing of mutton be made superior to the wool. But increased attention seems to be paid to the subject South and West, and from these regions must ultimately come the great amount of wool produced in the Union.

The gross receipts of a flock of sheep may be put down, if of the Merino blood, at not far from three dollars, depending upon the rate of the increase. With us now a Merino sheep yields from 4 to 5 lbs. of washed wool, which is worth 38 cents per lb., and the lambs are worth from \$1 50 to \$2 50 each, for common male lambs that have been castrated. Say 4 pounds of wool at 38 cents is equal to \$1 52, and allow only \$1 50 for the lamb, and we get \$3 000 for the value of the annual product of the sheep per head.

I speak of the Merino, for my experience satisfies me that for wool growing it is superior to any other breed. But I would by no means advise any person to make a very large outlay upon their breed at first. The best way would be to select the best of common breed of the country, which are acclimated and use good Merino rams. At the same time procure from ten to twenty full blood Merino ewes, so as to gradually grow into a pure or high grade flock.

There is no farmer who will not find his profits handsomely increased by keeping sheep, few or many, according to his circumstances.
—*Carolina Cultivator*.

The Art of Cattle Breeding.

Every reflecting mind will clearly perceive, and at once admit, that within the last few years science has rapidly advanced the art of feeding cattle. Let us view the British home-stead, a short period back. See the innumerable inconveniences to which the farmer was then subject; while on the other hand, he has at the present day every facility afforded him.

The importance of properly maintaining our cattle and horses is well understood; to effect which their food must be properly prepared, and this will doubtless become general, as all the resources of science are directed to economise its use.

It is universally admitted that when the grass is cut, the corn crushed, cake broken, the turnips, chaff, &c., also cut and steamed, not only an immense saving in first cost is thereby effected, but the animal is incredibly improved both in health and appearance; and these are considerations well worthy the attention of the practical farmer. In short, it is to those several processes of cutting, bruising, steaming, &c., that he must look for the crowning of his labors with success.—*American Agriculturist*.

Something about Horses.

POINTS OF A GOOD HORSE.

Zadock Pratt, in a late lecture on the horse, gives his opinion of what constitute good points:

He should be about fifteen and a half hands high; the head light, and clean made; wide between the nostrils, and the nostrils themselves large, transparent, and open; broad in the forehead, eyes prominent, clear and sparkling; ears small, neatly set on; neck rather short, and well set up; large arm or shoulder, well thrown back, and high; withers arched and high; legs fine, flat, thin, and small boned; body round and rather light, though sufficiently large to afford substance when it is needed, full chest, affording play for the lungs; back short, the hind quarter set on rather obliquely. Any one possessing a horse of this make, and weighing eleven or twelve hundred pounds, may rest assured he is a horse of all work, and a bargain well worth getting hold of.

Mr. Pratt is now seventy years of age, and has always been an admirer of fine horses, and is a competent judge. There are in Mr. P.'s Lecture many valuable hints. We give two or three.

CARE OF HORSES.—No horse can endure labor all the time. A few months in pasture, after being high fed and worked for several years, will renew his energies, as stated periods of rest and recreation will preserve the vital energies of man unimpaired through a long life; and by a wise law of Providence, which is as beneficial to the beast as to the man, a horse will do more labor in six days than if he were worked the whole seven.

In reference to the peculiar excellence of the horses of New York, I might say, I have driven a pair two hundred and forty miles in three days, or eighty miles per day, without injury. Amongst the many hundreds, and perhaps thousands of drivers and teamsters in my employ, I had a slow moulded man by the name of Dana Brown, who drove for me some ten years, and always drew the largest loads in the same time, and with less fatigue to his horses, than any other driver I ever knew. His horses would look better on the same feed than those of any other, and they always appeared in good condition, while those in charge of others gave unmistakable evidence of improper usage. Forty, fifty, and even sixty hundred weight has he drawn over the Catskill mountains with one pair of horses, and I am only doing him an act of justice to say that he never wore out a lash, and hardly a snapper in the whole time. Whilst other teamsters had sick horses, his were always in a good condition. The whole number of teams I had in one year averaged in three

working days 2,600 pounds to Prattville, and 3,000 pounds to Catakill, a distance of thirty-six miles, making about two and a half millions of pounds in all. I mention these facts as illustrating the great benefit of a good management of horses, and of roads.

In feeding a horse it should be remembered that corn has a tendency to make him slow, as may be witnessed in the slow moving corn-fed horses of horses of Ohio. Oats are more suitable to develop all his qualities, and from ten to sixteen quarts per day should be given. — *Ohio Farmer.*

Rotation of Crops.

We farm it here in the west, altogether too much at random. Wheat is put upon this field, and corn upon that, oats upon another, and so on, without a philosophical reason ever being asked therefor. To be sure, every one knows that constant cropping will impoverish the land,—that if he sows wheat after wheat upon any one field for several years in succession without manure, he will get a constantly diminishing product, till finally the yield will not pay the rent of the land. But why is this so? Simply because some one or more ingredients which the crops derived from the soil, has been gradually extracted by the roots, and carried off in the grain, until there is not enough left in a soluble state to supply the wants of this particular plant. As a consequence, it fails to grow. Very simple indeed.

But though this field will not produce wheat profitably, yet roots, potatoes or grass, will flourish exuberantly. Thus it is a fortunate circumstance for us, that when a field becomes exhausted of one particular class of substances, it will be sure to bring good crops of grain or of roots which require a different class of their development. It is this beautiful provision of nature which furnishes the foundation for all correct rotations. Nature herself ever observes it in the re-production of her forests.

Our common crops may be divided into classes, according to the mineral elements they are found to contain. (And here one particular fact is worthy of notice; that while phosphoric acid is the leading ingredient in all the grains, it is least abundant in all soils. Hence the rapid exhaustion of most soils when constantly cropped with grain.) "There are three great leading classes of each established: 1. The grains where phosphoric acid predominates; 2. The roots where potash and soda abound; 3. The grasses where lime becomes quite important; 4. The various kinds of straw, may perhaps be said to constitute a fourth class, where silica is from one half to

two-thirds of the whole weight. — *Norton's Essay.*

From the considerations and facts above given, a correct, or at least a good system of rotation may be laid down. Though we may be safe in the practice of following one grain crop with another, the grass and roots should be made to alternate as often as possible. "But suppose I turn under a clover lea for wheat, and it is my purpose to plant to corn the next spring after the wheat comes off, will it "pay" to seed upon the wheat?

Most assuredly it will. The fall feed which the clover affords will pay for seed, besides it will keep down an unsightly growth of noxious weeds.

Every farmer must fix upon a rotation suited to his soil, his tastes and circumstances. *Laboratory* rotations, which some chemists have organized and sent out are very useless things. Not one farmer in five-hundred finds them practicable. We hope to see more attention given to this subject among farmers, for it is a very important one. — *Michigan Farmer.*

CURE FOR SNAKE BITES.—Dr. Thomas of Monticello, Ind., reports a case of rattlesnake bite. Mr. J. H. S. (age 38, who stands six feet six in his stockings; who, by the way, is very fond of brandy,) who had just been bitten on the inside of his left heel by a large rattlesnake—both fangs had been well inserted in the muscles. In 36 hours he was sound and well. I gave him, in the short time alluded to, one quart of brandy and one and a half gallons of whisky—all without interrobation. He wanted more, and I refused to supply his wants.

The next day Mr. H., his next neighbor was passing along, and saw him with his pants rolled to his knees, barefooted, and wading round in some weeds and grass with his feet. H. asked if he had lost any thing. "No sir." "What are you doing then?" "I am hunting a snake. There ain't any liquor only what Dr. Thomas has, and he won't let me have any unless I am snake-bit, so I am hunting one." — *North Western Medical and Surgical Journal.*

Red clover will extend its roots to the depth of three feet, and wheat to the depth of two or three feet, if the soil will permit. This shows the necessity of plowing deep.

CURE FOR GARGET.—Joseph Merriam, of Ohio, states, in the *Ohio Farmer*, that raw linseed oil, rubbed over the cow's bag, will cure the garget. He says it is a certain remedy.

Keeping Sweet Potatoes.

A. G. furnishes to the Dollar Newspaper his method of preserving potatoes, in which he says, "I dig my crops as soon as the frost has killed the vines, so that I think that they are done growing, endeavoring to do this where the ground is at least moderately dry. I remove them in a short time, the sooner the better, to a cellar under my house, at the back of which I have a place divided off like a wheat bin, large enough for the crop. This is made by placing posts or studding in the ground, a few inches, and nailing the tops to the sleepers that support the floor above; then put plank half the length of the bin, meeting at the middle post, twelve or fourteen inches wide, so that you can remove them at pleasure. When you take out all but one plank, then fill with potatoes until as high as the plank all over the bottom of the bin; then throw over dry sand, if you can get it, if not, dry earth will do; sand is preferable because it will penetrate all the open places between the potatoes, and exclude the air—the great secret, I think, in preventing rot. Continue to add plank, and cover each layer as above and when your crop is all in, cover over from four to six inches deep with sand or dirt.

I never suffer potatoes to be exposed during the winter, compelling those who get them to grapple them out from the top until the dirt accumulates so as to be in the way; I then scrape off a portion, leaving the remainder of the crop always covered. I have been using the same sand for fifteen years. One other remark is, perhaps, necessary; after putting up my crop during the warm weather through the fall months, I keep the doors of my cellar open through the day, so that the warm air from the potatoes, may the more readily escape. I have been using as fine potatoes, during September, of last year's crop as I ever saw.

Another correspondent has been quite successful in packing them in boxes, which are nailed up after filling the spaces between the potatoes with charcoal.

SHAPING CATTLE'S HORNS.—My first attempt to correct the freaks of nature in this matter, was upon the horns of a pair of steers then owned by my father. Without giving the details, suffice it to say that I compelled the horns of one steer to take a more upright position, and at the same time a broader view, so as to correspond with those of the other. Since that time I have never failed of success. In my opinion the best time is to commence in the month of March, and continue the operation till the horns become hardened for the winter. The process is simply this: if you wish the horns to grow more upright, you

must take a knife or other instrument, and by shaving or scraping, reduce the shell of the horn to about one half the original thickness, as a general rule, (but this must depend on the amount you wish to alter the horn) upon the under side of the horn. And it at the same time you wish to spread or contract, always upon the opposite side of the horn from the direction in which you wish it to turn. The horn should always be left perfectly smooth, and occasionally oiled over with some penetrating oil. If the horns are to be corrected but little, the operation of thinning once may be sufficient, but if they are more imperfect it may be necessary to follow them up with more thinning till they are made to yield?—

—Am. Agriculturist.

Salt for Animals.

Professor Simonds, Veterinary Inspector to the Royal Agricultural Society, observes, in relation to the action of salt on the animal economy, that "it is exceedingly beneficial in moderate quantities, but prejudicial in large ones. He thought horses might take with advantage from an ounce and a half to two ounces of salt daily; but that an excess of it would render animals weak, debilitated, and unfit for exertion. Similar facts were also applicable to oxen, which accumulated flesh faster by the judicious use of salt, than without it. He cited Arthur Young and Sir John Sinclair, to show that salt had a tendency to prevent the rot in sheep. Prof. S. added, as his own opinion that salt, by its action on the liver, and the supply of soda it yielded to the bile, led to a greater amount of nutriment being derived from the food. The substance, he said, was also well known as a vermifuge, destroying many kinds of worms in the intestines of animals, and conferring a healthy tone of action which prevented their recurrence. Several members of the R. A. Society, as Colonel Challoner and Mr. Fisher Hobbs stated that their experience led them to agree with Professor Simonds in regard to the value of salt for animals.

In reference to the mode of giving it, the practice of placing large lumps of rock salt in a field or yards, where it was always accessible to the stock, was mentioned with approbation. This practice is now adopted by many farmers in this country, and after several years trial, is preferred to the former mode of giving salt periodically. When animals are only allowed to have salt once or twice a week, it is sometimes the case that they eat too much at once; but, by having it constantly in their reach, they eat in such quantities as their systems require, and it assists digestion and promotes health and thrift.

—Albany Cultivator.

OFFICIAL LIST OF PREMIUMS,

AWARDED AT THE

THIRD ANNUAL FAIR,

OF THE

Mo. State Agricultural Society,

Held upon the Fair Grounds, near the City of Boonville, on Monday, Tuesday, Wednesday, Thursday and Friday the 1st, 2nd, 3rd, 4th, and 5th days of October, A. D. 1855.

Office of the Mo. State Agricultural Soc. }
Boonville, Missouri, October, 1855. }

FIRST DAY.

Before commencing the proceedings, at the request of the President, prayer was offered by Rev. F. A. Witherspoon.

ORCHARD.

Awarding Committee.—E. B. Cordell, of Cole; A. W. Simpson, of Cooper; J. Locke Hardeman, of Saline; W. F. Switaler, of Boone; Jesse Basket of Howard.

Apples, display good varieties, six entries, John McCutchen, of Cooper, premium \$5; H. M. Myers, of Cooper, certificate.

Pears, display of good varieties, one entry, M. P. Leintz, of Boone, premium \$2 50; Peaches, display good varieties, six entries, A. J. Rothrock, of Cooper, premium \$2 50; S. S. Seat, of Cooper, certificate.

Plums, display of good varieties, one entry, Alex. Givens, of Cooper, premium \$2 50; Quinces, dozen, two entries, D. C. Byler, of Cooper, premium \$1; H. M. Myers, of Cooper, certificate.

Grapes, display hardy varieties, three entries, E. Byler, of Cooper, premium \$5; H. M. Myers, of Cooper, certificate.

Grapes, varieties under glass, one entry, H. M. Myers, of Cooper, premium \$2 50; Grapes, best bunch on single stem, two entries, H. M. Myers, of Cooper, premium \$1; E. Boiler, of Cooper, certificate; native for table use no entry.

Wine, Missouri made, six bottles, eight entries; William Haas, of Cooper, premium \$10; George Vollrath, of Cooper, certificate.

Wine, domestic made by a lady, six entries, Mrs. T. W. Sampson, of Boone, prem. \$2 50; Mrs. Dr. Ellis, of Cooper, certificate.

DISCRETIONARY PREMIUMS.

Apple Trees, Julius Mallinckrodt, of St. Charles, exhibited a variety of specimens which were examined by the committee and reported to be very fine and deserving a premium, premium awarded.

George Hussman, of Gasconade county, who had been detained by accident, until too late an hour to exhibit in competition with the regular list, presented the following specimens:

Apples, display of varieties, Grapes, display of, Grapes, for table use and on single stem, Quinces, dozen, Dahlias, display of, Pears display of; said specimens being adjudged to be of an excellent order, the Directors awarded him a premium thereon, \$5.

GARDEN.

Awarding Committee.—R. D. Perry, of Cooper; M. P. Leintz, of Boone; V. M. Tyler, of St. Louis; Thos. E. Thompson, of Palmyra; Wm. A. Wilson, of Saline.

Cabbage, six heads, fifteen entries, Mrs. T. W. Sampson, of Boone, premium \$2 50.

Potatoes, Irish largest yield per half acre, three entries, E. P. Elliot, of Cooper, premium \$5; Potatoes, Irish largest display of good varieties, six entries Alex. Givens, of Cooper, premium \$2 50; D. C. Steele, of Cooper, certificate.

Potatoes, sweet or yam, three entries, Samuel Woodrige, of Cooper, premium \$3; Dr. E. Yanoy, of Boone, certificate.

Turpins, twelve for table, two entries, Isaac Gearhart, of Howard, premium \$2 50; M. J. Tucker, of Cooper, certificate.

Beets, twelve for table, twenty-one entries, H. M. Myers, of Cooper, premium \$2 50; J. S. Houx, of Cooper, certificate.

Parsnips, twelve for table, seventeen entries, Mrs. A. Gibson, of Cooper, premium \$2 50; Mrs. C. Jones, of Cooper, certificate.

Onions one peck, seven entries, Mrs. A. Gibson, of Cooper, premium \$2 50; Mrs. E. H. Harris, of Cooper, certificate.

Celery, dozen bunches, one entry, Mrs. C. B. Combs, of Cooper, premium \$2 50.

Salsafa, dozen, four entries, H. M. Myers, of Cooper, \$2 50; Mrs. Dr. Ellis, of Cooper, certificate.

Carrots, dozen, five entries, Mrs. A. Gibson, of Cooper, premium \$2 50; Mrs. S. S. Seat, of Cooper, certificate.

Cauliflower, dozen, no entry; Egg-plant, dozen, one entry, H. M. Myers, of Cooper, premium \$1.

FLOWERS AND PAINTINGS.

Awarding Committee.—Chas. W. F. Switzler, of Boone; Thos. E. Thompson, of Marion; John Pledge, of Callaway; John H. Estill, of Howard.

Flowers, display of &c., three entries, Mrs. David Spahr, of Cooper, premium \$5; J. Thornburn, of Cooper, certificate.

Boquet, handsomest, three entries, Mrs. John Porter of Cooper, premium \$2 50; Mrs. D. Spahr, of Cooper, certificate.

Flowers, Cut, design for, one entry, Mrs. H. Bunce, of Cooper, premium \$2 50.

Flowers Cut, display of, one entry, Mrs. H. Bunce, of Cooper, premium \$2 50.

Dahlias, display of, no entry.

Pencil Sketch, by a lady, two entries, Mrs.

Ann Girard, of Cooper, premium \$5; Miss Jane Buchanan, of Cooper, certificate.
Painting, by a lady, one entry, Mrs. T. Digby, of Cooper, premium \$5.
Printing, specimen of Book and Pamphlet, one entry, Col. W. F. Switzer, of Boone, premium \$5.

AWARDING COMMITTEE.—O. Abbott; Audrain; Jack White; Howard; J. H. Brant, St. Louis; Chas. A. Bailly, Callaway; T. Jenkins, Boone.
Butter, 20 lbs. made before 1st Aug., nine entries. Mrs. C. B. Combs, of Cooper, prem. \$10; Mrs. A. Gibson, of Cooper, certificate.
Butter, 5 lbs. ten entries. Mrs. A. Gibson, of Cooper, premium \$5; Mrs. J. Buchannan, of Cooper, certificate.

Cheese, 5 lbs. three entries. Mrs. T. Stanley, of Cole, premium \$5; Mrs. E. E. Bagn, of Boone, certificate.

Honey, 5 lbs., six entries, Mrs. Chr. Keill, of Cooper, premium \$2 50; Mrs. Samuel Woolridge, of Cooper, certificate.

Pickles, fifteen entries, Mrs. D. W. C. Mack, of Cooper, premium \$5; Mrs. D. Ballentine, of Cooper, certificate.

Preserves, ten entries, Mrs. John Porter, of Cooper, premium \$5; Mrs. D. W. C. Mack, of Cooper, certificate.

Bread, wheat, loaf twelve entries, Mrs. Chr. Keill, of Cooper, premium \$1; Mrs. J. R. Lionberger, of Cooper, certificate.

Bread, corn, loaf, Mrs. D. Ballentine, of Cooper, premium \$1.

Ham, cooked, six entries, Mrs. M. P. Leints, Boone, premium \$5; Mrs. Washn. Adams, of Cooper, certificate.

Ham, uncooked, four entries, John Porter, of Cooper, premium \$5; John Lee, of Howard, certificate.

Candles, tallow, & wax, 5 lbs., six entries. Mrs. T. W. Sampson, of Boone, premium \$2; Mrs. D. Andrews, of Cooper, certificate.

Candles, tallow, 5 lbs., seven entries, Mrs. T. W. Sampson, of Boone, premium \$2; Mrs. T. W. Thornton, of Henry, certificate.

Lard, firkin 20 lbs., ten entries, Mrs. C. B. Combs, of Cooper, premium \$5; Mrs. John Lee, of Howard, certificate.

AWARDING COMMITTEE. Julius Sombart, of Cooper; Isaac Palmer, of Cole; John Ballentine, of Chariton; Rhodes Marshall, of Saline; John Fluke, of Cooper.

Wheat flour, barrel of two entries, J. F. Conner, of Cooper, premium \$15; M. Staley & Co., of Boone, certificate.

Corn meal, barrel of two entries, M. Staley & Co., of Boone, premium \$5; Samuel Woolridge, of Cooper, certificate.

Backwheat flour, no entry; Rye flour, no entry.

HEDGES, ENCLOSURES &c.

Awarding Committee, J. Locke Hardiman, of Saline; Wm. Douglass, of Cooper; Isaac Lionberger, of Cooper.

O. Orange, best quarter mile one year old, no entry; best quarter mile two year old, two entries, T. W. Gaines, of Saline, premium \$7 50; Henry Berger, of Cooper, cert.

O. Orange, best quarter mile three years old, two entries, Henry Berger, of Cooper, premium \$10.

Portable fence, best model of two entries, Mark O. Ainslie, of Cooper, premium \$10; Ignatious Hazell, of Cooper, certificate.

HATS, SHOES, BOOTS, AND LEATHER.

Awarding Committee, S. D. Sanger, of St. Louis; E. B. Cordell, of Cole; Isaac Lionberger, of Cooper; Chas. H. Steward, of Howard; Wm. H. Barnes, of Cole.

Fur Hats, one entry, Lewis & Groshon, of St. Louis, prem. \$5; Silk Hat, one entry, Lewis & Groshon, of St. Louis, premium \$3; Wool Hat no entry; Straw Hat, two entries, Lewis & Groshon, of St. Louis, premium \$1; Mrs. H. S. Elliott, of Howard, cert.

Boots for gentlemen, one entry Thos. M. Blant, of Cooper, premium \$2; Boots for Misses, one entry, Mrs. Emma Sandford, of Cole, premium \$3; Shoes, Ladies one entry, Mrs. Emma Sandford, Cole, prem. \$3; Shoes made by a lady, one entry, Mrs. Emma Sandford, of Cole, prem. \$3; Shoes, coarse negro, no entry; Leather, side, sole, one entry, J. Rice, of Cooper, prem. \$3; Leather side upper thirteen entries, J. Rice, of Cooper, premium \$2; Haseltine & Bent, of Saint Louis, cert.

Leather, side, harness, eleven entries, J. Rice, of Cooper, prem. \$3; Haseltine, & Bent, of St. Louis, certificate.

Leather, bridle dressed, one entry, J. Rice, of Cooper, prem. \$3.

Calf skins, half doz., one entry, J. Rice, of Cooper, prem. \$3.

SILVER, OTHER WARE AND GUNS.

Awarding Committee, J. L. Tracy, of Cooper; O. Abbott, of Audrain; Wm. Spear, of Howard; Wm. A. Landrum, of Howard; Chas. McCormick, of Cooper.

Silver ware, display of two entries, E. Jaccard, of St. Louis, prem. \$10; Edwin A. Skeele, of St. Louis, cert.

Marble or stone cutting, one entry, E. K. Badwell, of Cooper, prem. \$5.

Stone pottery, one entry, Glazier & Co., of Boone, prem. \$2 50.

DISCRETIONARY PREMIUMS.

Edwin A. Skeele, of St. Louis, had on exhibition a display of diamonds, fine watches, fine jewelry and fancy goods, which having been examined by the above named committee, were reported to be of a superior quality and entitled to a premium, and thereupon the

Board of Directors, awarded a premium of \$5.

IRON CASTINGS.

Fifty dollars worth of premiums were offered to this class but no entries were made.

MONEY SALES.

Awarding Committee—T. W. Sampson, of Boone; James R. Estill, of Howard; Andrew Gibson, of Cooper.

Money Safe, fire, damp and thief proof, two entries, N. Constable, Jr., of St. Louis, premium \$5; Beard & Brox., of St. Louis, certificate.

SECOND DAY.

AGRICULTURAL IMPLEMENTS AND USEFUL MACHINES.

Awarding Committee—W. M. Jackson, of Howard; Joseph Shoewalter, of Lafayette; J. Locke Hardeman, of Saline; T. W. Sampson, of Boone; Henry Larrimore, of Callaway.

Plow, two horse for sod, two entries, Wm. Knäus, of Cooper, premium \$5.

Plow, two horse, for stubble, three entries, Wilson & Davis, of Monroe, premium \$5; Chr. Force, of Cooper, certificate.

Plow, one horse, three entries, Chr. Force, of Cooper, premium \$3; Wilson & Davis, of Monroe, certificate.

Plow, subseil, no entry.

Plow, prairie, two entries, Wilson & Davis, of Monroe, premium \$10; Wm. Knäus, of Cooper, certificate.

Harrow, large plan and material, one entry, T. L. George, of Cooper, premium \$5.

Roller, plan and material, no entry.

Wagon, large and small, three entries, M. Biggs, of Monroe, premium \$10; A. A. Avery, of Cooper, certificate.

Cart, horse, one entry, A. A. Avery, of Cooper, premium \$5.

Cutting Box, plan and material, two entries, Christian Force, of Cooper, premium \$5; Wm. Knäus, of Cooper, certificate.

Hempbrake, hand, no entry.

Hempbrake, power, one entry, no premium awarded.

Machine for cutting hemp, no entry.

Reaper, no entry.

Mower, no entry.

Seed Sower, two entries, J. W. Palmer, of Boone, premium \$2 50; same certificate.

Drill, no entry.

Hay Rake, horse, no entry.

Mill, portable plantation, one entry, J. B. Chadwick, of St. Louis, as manufacturer of the "Little Giant corn and cobb crusher," premium \$5.

Grads, mowing, no entry.

Hempsecks, one dozen, no entry.

Gate, plantation model of &c., three en-

tries, J. W. Palmer, of Boone, premium \$3;

T. L. George, of Cooper, certificate, made.

Hind gear for wagon, no entry.

Horse power, specimen, one entry, J. B. Chadwick, of St. Louis, premium \$10.

Pump, plan and material, one entry, F. R. Marshall, of St. Louis, premium \$5.

Threshing machine, no entry.

Corn sheller, no entry.

Corn crusher, one entry, J. B. Chadwick, as manufacturer of "Little Giant corn and cobb crusher," premium \$5.

Wheat fan, no entry.

Brooms, half dozen, corn raised, &c., by exhibitor, one entry, Alex. Givens, of Cooper, premium \$3.

DISCRETIONARY PREMIUMS.

Awarding Committee—Col. Jo. Davis, of

Howard; R. R. Smith, of Lafayette; L. C. Stephens, of Cooper; E. B. Cordell, of Cole;

William Payne, of Howard.

Corn planter, E. Leigh, of St. Louis, premium \$1.

Machine for dressing mill stones, J. G. Shands, of St. Louis, premium \$2.

Artificial roofing and artificial rock, F. Marshall, of St. Louis, premium \$2 50.

Hydraulic Ram, J. G. Doyle, of Saline, premium \$1.

Steam engine, made in Booneville, by boy 17 years old, Mark O. Ainslie, premium \$5.

Adolphus Myer & Co., of St. Louis, had on exhibition from their factory the following articles, viz:

Domestic, 1 piece,

Cotton yarn, 1 piece,

do twine, lot,

Carpetchain, bunch, white,

do do colored,

Candlewick, bunch.

Which articles having been adjudged to be of a superior quality, the Directors awarded a premium thereon, \$5.

FOR EXHIBITION ONLY.

Bracelet, from Missouri Iron. Mrs. Lewis F. Linn, of Cooper county, placed on exhibition a handsome bracelet, made in Paris; out of the best iron ore, that was taken from the Iron Mountain of Missouri, by her husband Dr. Linn in his lifetime; and the experiments with which confirmed the facts that said ore in many respects is equal and, for some purposes, is superior to that of any other in the United States.

Pitcher and Vase of Cut Glass, from Missouri Sand, Mrs. Lewis F. Linn, also, placed on exhibition, a beautiful Pitcher and Vase, made at the Glass Factory of Thos. Swinney in Wheeling, Va., out of Sand taken from the Ste. Genevieve, Mo., Sand Bank. A large Vase made from said sand by Mr. Swinney, took the first premium at the World's Fair,

in London. The superior quality of said sand was first ascertained by Mr. Swinney, from a barrel of sand sent him by Dr. Linn in his lifetime.

CABINET AND CARPENTERS WORK.

Under this list there were seventy-eight dollars worth of premiums offered, but no entries made.

ARTICLES OF WOOL, COTTON AND SILK.

Awards made by a Committee of Ladies:

Jeans, 10 yards homemade, eleven entries, Mrs. Stephen Gibbs, of Howard, premium \$5; Mrs. J. H. Sampson, of Boone, certificate.

Jeans, 10 yards factory made, no entry.

Jeans, 10 yards negro homemade, eight entries, Mrs. T. W. Sampson, of Boone, premium \$3; Mrs. J. H. Sampson, of Boone, certificate.

Cloth, 10 yards fullered, factory made, one entry, Gibbs & Stonebraker, of St. Charles, premium \$5.

Linsey, colored, 10 yards homemade, four entries, Mrs. T. W. Sampson, of Boone, premium \$3; Mrs. Dr. W. T. Thornton, of Henry, certificate.

Flannel, white, 10 yards, three entries, Mrs. T. W. Sampson, of Boone, premium \$3; Mrs. J. H. Sampson, of Boone, certificate.

Flannel, colored, no entry.

Hearth Rug, no entry.

Hose, pair woolen, sixteen entries, Mrs. W. T. Thornton, of Henry, premium \$2; Mrs. Hannah Conner, of Boone, certificate.

Hose, pair half, by girl under 12 years old, Miss C. J. V. Thornton, of Henry, aged eight years, premium \$2; Miss Emma Talbot, of Warren, aged 5 years, premium \$2. No certificate awarded.

Blankets, pair homemade, five entries, Mrs. W. T. Thornton, of Henry, premium \$5; Mrs. E. E. Bass, of Boone, certificate.

Blankets, factory made, one entry, Gibbs & Stonebraker, of St. Charles, premium \$5.

Bed spread or coverlet, twelve entries, Mrs. John Rontesp, of Cooper, premium \$5; Mrs. Hannah Conner, of Boone, certificate.

Carpeting, woolen yarn, 10 yards, nine entries, Mrs. E. E. Bass, of Boone, premium \$10; Mrs. R. L. McAfee, of Boone, cert.

Carpeting, rug, 10 yards, ten entries, Mrs. E. E. Brannan, of Boone, premium \$5; Mrs. A. Tucker, of Cooper, certificate.

Embroidery, long stitch silk, seven entries, Mrs. B. Bryan, of St. Louis, premium \$3; Mrs. Jo. G. Smith, of Cooper, certificate.

Embroidery, short stitch silk, two entries, Mrs. F. E. Williams, of Howard, premium \$3; Mrs. B. McCormick, of Ralls, certificate.

Embroidery, worsted, thirteen entries, Mrs. E. P. Faulkner, of Green, premium \$3; Miss E. B. Hutchings, of Lafayette, certificate.

Needle work in linen, or cotton thread, nine entries, Mrs. Hannah Conner, of Boone, premium \$3; Miss Laura Brannan, of Boone, certificate.

Worsted, tufted work, one entry, Mrs. A. C. Goddin, St. Louis, premium \$3.

Sewing thread, 1 lb., five entries, Mrs. W. T. Thornton, of Henry, premium \$2; Mrs. J. Estis, of Boone, certificate.

Hemp linen, 10 yards, one entry, Mrs. H. S. Elliott, of Howard, premium \$3.

Flax linen, 10 yards, five entries, Mrs. C. Harness, of Cooper, premium \$3; Mrs. Alex. Givens, of Cooper, certificate.

Tow linen, one entry, Mrs. Alex. Givens, of Cooper, premium \$2.

Ornamental leather work, one entry, Mrs. T. Digby, of Cooper, premium 3.

Hose, pair cotton, homemade, five entries, Mrs. W. T. Thornton, of Henry, premium 2; Mrs. Hannah Conner, of Boone, certificate.

Coat, jeans cut, prepared and made by a lady, seven entries, Mrs. Mary L. Wilson, of Cooper, premium 5; Miss Patterson, of Howard, certificate.

Shirt, linen, one entry, Mrs. C. B. Combs, of Cooper, premium 2.

Shirt by girl under twelve years old, two entries, Miss S. Emma McNeill, of Daviess, premium 5; Miss Eliza Smith, of Cooper, cert.

Shirt by girl under ten years old, three entries, Miss S. Emma McNeill, of Daviess, premium 2; Miss Sallie G. Minor, of Cole, cert.

Full suit of clothes by a tailor, one entry, Levi Talbot, of Cooper, premium 10.

Quilt, silk, three entries, Mrs. B. McCormick, of Ralls, premium 10; Miss Jimmy McGiffin, of Boone, certificate.

Quilt, worsted, three entries, Mrs. P. R. Salmon, of Boone, premium 10; Mrs. E. E. Brannan, of Boone, certificate.

Quilt, cotton, nine entries, Mrs. J. DeVance, of Boone, premium 10; Mrs. E. W. McMannahan, of Boone, certificate.

Shawl, woollen, two entries, Mrs. W. T. Thornton, of Henry, certificate.

Bonnet, fancy, five entries, Mrs. E. A. White, of Lafayette, premium 5; Mrs. A. Miller, of Cooper, certificate.

Dress for child under six months old, one entry, Mrs. E. P. Elliott, of Cooper, premium 2 50.

Dress for boy under twelve years old, five entries, Mrs. W. Thornton, of Henry, premium 250; Mrs. C. Harness, of Cooper, cert.

Dress for girl under twelve years old, three entries, Mrs. Ira P. Brooks, of Howard, premium 2 50; Mrs. C. Harness, of Cooper, certificate.

Sewing Machine, foreign or domestic, no entry.

DISCRETIONARY PREMIUMS.

Mrs. Dr. W. T. Thornton, of Henry county, put upon exhibition the following articles of her own manufacture, viz:

Basket, made of oat straw; Mianes hat, made of home raised cotton; over shoes, woolen; wrappers, woolen; door mat, made of wool, wove from raw material; net silk mits, home made; mittens, woolen; half hose, woolen; half hose, cotton; half hose, made by her daughter eight years old. Said articles not being provided for in the regular list, and having been adjudged to be of a superior quality, the Directors awarded them a premium of 5.

Carpeting, Mrs. J. H. Speed, of Morgan, premium 2 50.

ARTIFICIAL FLOWERS.

Artificial flowers, Mrs. Charles Vallet, of the city of St. Louis, placed on exhibition a display of beautiful, artificial flowers of her own manufacture, which being of a very superior order, there was awarded thereon a premium 2 50.

HEAD DRESSES, WREATHS, AND MANTILLAS.

Mrs. A. Miller, of the city of Booneville, had on exhibition a display of ladies Head dresses, Wreaths, and Mantillas, which on account of their beauty and superiority, received a premium of 2 50.

CHILD'S STOCKINGS.

Mrs. Margaret Riley, of the city of St. Louis, exhibited three pair of child's stockings, which on account of fineness of material, and beauty of finish, received a premium of 1.

CARRIAGES BUGGIES, &C.

Awarding Committee—J. B. Brant, of St. Louis; Henry Flint, of Lexington; G. E. Brutt, of Palmyra; A. G. Blakey, of Benton county; A. Slack of Cooper.

Carriage, six seat, two entries. Fallon & Wright, of St. Louis, premium 10.

Rockaway, four seat, one entry. Fallon & Wright, St. Louis, premium 10.

Buggy top, four entries. Fallon & Wright, of St. Louis, premium 10; T. B. Edgar, of St. Louis, certificate.

Buggy, open, three entries. Alexander Finney, of St. Louis, premium 8; Fallon & Wright, of St. Louis, certificate.

Carriage, foreign, one entry. T. B. Edgar, of St. Louis, premium 10.

Buggy, foreign, five entries. Alexander Finley, of St. Louis, premium 8; T. B. Edgar, of St. Louis, certificate.

Harness, sett, carriage, three entries. J. Steinaeker, of St. Louis, premium 10.

Harness, sett, buggy, five entries, J. Steinaeker, of St. Louis, premium 6; S. Cornad, of Callaway, certificate.

Harness, sett, carriage, discretionary. T. B. Edgar, of St. Louis, premium 5.

Saddle and bridle, man's, four entries. Calhoun & Sterling, of St. Louis, premium 5; J. Steinaeker, of St. Louis, certificate.

Saddle and bridle, ladies, one entry. J. Steinaeker, of St. Louis, premium 5.

HEMP, ROPE, &C.

Awarding Committee—Joseph Shelby, Lafayette; Stephen Smith, Saline; Wm. H. Dyer, Callaway; Thos. J. Bartholow, Howard; Jos. Shawalter, Lafayette.

Cotton bagging, thirty yards, two entries. Mrs. J. H. Speed, of Morgan, premium 10; same, certificate.

Coil bale rope of hemp, five entries. McGrew & Bros., of Lafayette, premium 5; Missouri Manufacturing Company of St. Louis, certificate.

Coil bale rope of tow, one entry. John Bellis, of Boone, premium 5.

Coil halter rope of straw, one entry. John Bellis of Boone, premium 5.

Cordage and twine display, of one entry. John Bellis, of Boone, premium 5.

Hemp, 25 pounds dew rot, from brake, five entries. J. H. Estill, of Howard, premium 20; J. L. Obryan, of Cooper, certificate.

Hemp, 25 pounds, water rot from brake, one entry. John Miller, of Howard, premium 20.

Hemp, 25 pounds dew rot, hackled, three entries. Johnson, Bartly & Lythe, of St. Louis, premium 20; J. H. Estill, of Howard, certificate.

Hemp, 25 pounds water rot, hackled, three entries. John Miller, of Howard, premium 20.

Hemp bagging, belt. St. Louis Hemp Bagging and Rope company, of St. Louis, premium 5.

TOBACCO.

Awarding Committee—Thomas Talbot, of Warren; R. Beasley, of Chariton; Wiley J. Hutton, of Howard; Wm. T. Gillum, of Saline; David Spahr, of Cooper.

Tobacco, 25 lbs. manufacturing leaf, 3 entries.

Greenville Heffelfinger, of Howard, premium 20; John Slack, of Boone, certificate.

Tobacco, 25 pounds shipping leaf, five entries. F. E. Williams, of Howard, premium 20; W. J. Basket, of Howard, certificate.

Tobacco, box manufactured, sixteen entries. B. W. Lewis & Bro., of Howard, premium 10; Speer & Swinney, of Howard, certificate.

Box cigars, one entry. Wm. J. Gambrell, of Howard, premium 5.

PRODUCE OF THE FIELD.

Awarding Committee—Joel Smith, of Raddolph; A. W. Turner, of Boone; Jeremiah

Dixon, of Cole; J. P. Estill, of Howard
John Sampson, of Callaway.

Wheat, largest yield per acre, of five acres.

T. W. Sampson, of Boone, on fifty-one and a half bushels, premium 20; B. McCormick, of Ralls, on forty-nine bushels twenty-six pounds, certificate.

Wheat, largest yield per single acre, four entries. B. McCormick, of Ralls, on fifty-eight bushels sixteen pounds, premium 10; T. W. Sampson, of Boone, on fifty-one and a third bushels, certificate.

Wheat, one bushel white, six entries. J. L. Minor, of Cole, premium 10; C. Q. Lewis, of Cooper, certificate.

Wheat, ten bushels red, six entries. Alex. Givens, of Cooper, premium 10.

Wheat, bushel spring, one entry. Alex. Givens, of Cooper, premium 10.

Rye, largest yield per five acres, one entry. J. W. White, of Cooper, premium 10.

Rye, bushel, two entries. J. W. White, of Cooper, premium 5; J. Mallinckrodt, of St. Charles, certificate.

Oats, largest yield per acre of five acres, one entry. Wm. H. Stephens, of Cooper, premium 7.

Oats, bushel, four entries. Alexander Givens, of Cooper, premium 5; J. L. Obyran, of Cooper, certificate.

Meadow, five acres timothy, one entry. T. Talbot, of Warren, premium 10.

Clover seed, one entry. J. Mallinckrodt, of St. Charles, premium 10.

THIRD DAY.

POULTRY.

Awarding Committee.—Henry E. Moore, of Cooper; B. J. Brown, of Ray; N. W. Wilson, of Boone; A. G. Blakely, of Benton; Isaac Lionberger, of Cooper.

Turkeys, pair, six entries. Mrs. Mary L. Wilson, of Cooper, premium 2; Master W. L. Lyman, of Cooper, certificate.

Ducks, pair, six entries. Mrs. I. E. Houx, of Cooper, premium 2; Mrs. D. Ballentine, of Cooper, certificate.

Geese, pair, three entries. David Ballentine, of Cooper, premium 2; J. W. Sherman, of St. Louis, certificate.

Chickens, Dorking, pair, three entries. John Thorburn, of Cooper, premium 2; D. Ballentine, of Cooper, certificate.

Chickens, Shanghai, pair, seven entries. W. W. Norris, of Cooper, premium 2; D. Ballentine, of Cooper, certificate.

Chickens, Poland, pair, two entries. D. Ballentine, of Cooper, premium 2.

Chickens, Brahma Poutra, twenty-eight entries. W. W. Norris, of Cooper, premium 2; John Thorburn, of Cooper, certificate.

Fowls, greatest display of, D. Ballentine, of Cooper, on 21 varieties, premium 5.

DISCRETIONARY PREMIUMS.

J. W. Sherman, Esq., of St. Louis; who had been detained by accident, until too late a time to exhibit in competition with the regular list of poultry, exhibited the following fowls, viz:

Dorking chickens, one case, Poland chickens, one case, Brahma Poutra chickens, 19 cases, Variety, fowls, 23 cases.

The committee on poultry, after due examination, having reported that the Dorking, Poland and Brahma Poutra chickens of Mr. Sherman, were of a superior quality, the Directors awarded a premium of \$2 to each class, and a certificate for his variety of fowls.

HOGS.

Awarding Committee.—John Combs, of Cooper; John Tyler, of Lafayette; O. Hurt, of Saline, E. E. Bass, of Boone; A. W. Harrison, of Callaway; Charles M. Brooking, of Cooper.

Boar over one year old, five entries, W. J. Wyman, of Cooper, premium \$10; Lucky and Field, of Cooper, certificate.

Boar over six months &c., one entry, D. C. Byler, of Cooper, premium \$7 50.

Sow over one year old, two entries, Lucky & Field of Cooper premium \$10; A. Byler, cert.

Sow over six months &c., one entry, D. C. Byler, of Cooper, premium \$7 50; Pigs, pair under six months, two entries, Lucky & Field, of Cooper, premium \$7 50; Fat Hog, three entries, Lucky & Field, of Cooper, premium \$10; C. B. Combs, of Cooper, certificate.

SHEEP.

Awarding Committee.—C. H. Bailey, of Callaway; Dr. William Clarkston, of Boone; J. H. Baker, of Cooper; John Viley, of Randolph; George M. Ward, of Marion.

LONG WOOLLED.

Buck, Cotswold &c., eight entries, G. M. Brown, of Saline, premium \$10; same cert.

Ewe, Cotswold &c., &c., seven entries, C. H. F. Greenleaf, of Cooper, premium \$10; Chas. McCormick, " certificate.

MIDDLE WOOLLED.

Buck, three entries W. H. Cartwright, of Kentucky, premium \$10; G. M. Brown, of Saline, certificate.

Ewe, three entries, G. M. Brown, of Saline, premium \$10; Buck, Saxon or Spanish Marino, three entries, J. D. Russel, of Cooper, premium \$10; R. Gentry, of Pettis, certificate.

Ewe, Saxon or Spanish Marino, three entries, T. W. Sampson, of Boone, premium \$10; R. Gentry, of Pettis, certificate.

Buck, French Marino, one entry, R. Gentry, of Pettis, premium \$10; Ewe, French Marino, two entries, R. Gentry, Pettis, premium \$10; same certificate.

Fat sheep, one entry, John J. Tucker, of Cooper, premium \$3.

CATTLE—MISSOURI RAISED.

Bull over four years old, one entry, J. R. Estill, of Howard, premium \$10; Bull three years old and under four, no entry; Bull two years and under three, two entries, J. B. Clark, Jr., of Howard, on "Rolla," premium \$10; N. Leonard, of Cooper, on "Marmion," certificate.

Bull one year and under two, three entries, John Miller, of Howard, on "Utah," premium \$10; N. Leonard, of Cooper, "Fitz James," certificate.

Bull under one year old, three entries, Hutchison & Clark, of Cooper, premium \$10; George Fraser, of Boone, on "Malcom," certificate.

Cow four years and upwards, six entries, Henry Larrymore of Callaway, on "Kate Kearney," premium \$10; Sarah E. Rucker of Callaway certificate. Cow three years and under four, one entry, J. H. Sampson of Boone on "Kate Tracy," premium 10. Cow two years and under three, four entries, T. Jenkins of Boone, on "Quakeress," premium 10; N. Leonard of Cooper, on "Lady Pailey," certificate. Cow one year and under two, six entries, Hutchison & Clark of Cooper, on "Jenny Lind," premium 10; John Miller of Howard, on "Mattie Gray," certificate.

Cow under one year old, eight entries, A. W. Turner of Boone, on "Mary," premium 10; J. H. Sampson of Boone, certificate.

Oxen, yoke of, two entries, J. H. Baker of Cooper, premium 10; Joseph D. Russell of Cooper, certificate.

CATTLE, FOREIGN.

Bull four years old and upwards, five entries, J. O. Shelby of Lafayette, on "Douglass," premium 20; A. S. & J. H. Walker of Cooper, on "Alonzo," certificate.

Bull three years and under four, one entry, T. Jenkins of Boone, on "Duke of Orleans," premium 20.

Bull two years and under three, four entries, Dr. J. R. Smith of Cooper, on "Hero," premium 20; J. A. Talbot of Howard, on "Brutus," certificate.

Bull one year and under two, one entry, Henry Larrymore, of Callaway, on "John O. Gant," 1—1-2 premium \$10; Joseph Estis, of Boone, on "Capt. Cook," certificate.

Cow four years and upwards, four entries, Geo. Fraser, of Boone, on "Lilly Ball," premium \$10; Hutchison & Clark, of Cooper, on "Ada," certificate.

Cow three years and under four, two entries, T. Jenkins, of Boone, on "Kentucky Belle," premium \$20; Same on "Mag Hays," cert.

Cow two years and under three, seven entries, Hutchison & Clark, of Cooper on "Evaline," premium \$15; Joseph Estis, of Boone, on "Jenny Lind," certificate.

Cow one year and under two, five entries, G. Frazer, of Boone, on "Lilly Dale," premium \$10; W. H. Curtwright, of Kentucky, on "Bell of the West," certificate.

Cow under one year old, five entries, A. W. Turner of Boone, on "Clara," premium \$10; T. Jenkins, of Boone, on "Fanny Fern," certificate.

FAT CATTLE.

Fat bullock over five years old, three entries, P. M. Jackson, of Howard, premium \$20; Fat bullock four years and under five, one entry, Hutchison & Clark, of Cooper, premium \$15; Fat bullock three years and under four, three entries, N. Leonard, of Cooper, on Gen. Jackson, premium \$10; Hutchison & Clark, of Cooper, certificate.

Fat bullock &c., two years and under three, one entry, Hutchison & Clark, of Cooper, premium \$8; Fat bullock &c., one year and under two, three entries N. Leonard, of Cooper, on "Ellen," premium \$5; Hutchison & Clark, of Cooper, certificate.

SWEETSTAKES.

Bull, nine entries, Henry Larrymore, of Callaway, on "John O'Gant," premium \$50. A. W. Turner, of Boone, on "Oregon," cert.

Cow, nine entries, Hutchison & Clark, of Cooper, on "Evaline," premium \$5; George Frazer, of Boone, on "Lilly Dale," cert.

FOURTH DAY.

MULES.

Mule two years, and under three, one entry, J. H. Estill, of Howard, premium \$10; Mule one year and under two, three entries, Jack White, of Howard, on Dudee, premium \$8; A. & H. C. McPike, of Pike, certificate.

Mule colt, six entries, Wm. H. Bass, of Boone, on Irene premium \$5 J. H. Estill, of Howard, certificate.

Mules, pair three years and over, four entries, A. & H. C. McPike of Pike, premium \$10; S. T. Hughes, Howard, certificate.

Mules, pair two year and under three one entry, J. H. Estill of Howard, premium \$10; Mule best adapted to saddleuse, eight entries, S. J. Payne, of Howard, on "Gus White," premium \$10; W. C. Boone on "Stylus" cert.

JACKS AND JENNETTS.

Jack three years and upwards one entry, Sneed & vest, Kentucky, on Gen. Scott premium \$20; Jack, two years and under three, two entries, P. M. Thompson of Cooper, on "Big Giant," premium \$15; H. R. Walker of Cooper, on Tallyrand Jr., certificate.

Jack one year and under two, five entries, A. Aldridge of Howard, on "Clintnox," premium \$10; H. R. Walker, of Cooper, on "Bolivar," certificate.

Jack colt, one entry, H. R. Walker, of Cooper, on "Amicus," premium \$5

Jennette three years and upwards, four entries, N. Leonard, of Cooper, "Dulceua,"

premium \$15; W. H. Bass, of Boone, cert. Jeannette two year and under three, two entries. Wm. Neriah Todd, of Howard, premium \$10; Wm. Bradley of Cooper, cert.

Jeannette one year and under two, two entries; N. Leonard, of Cooper, on "Baltic," premium \$8; Rhodes Marshall, of Cooper, on "Farmer," certificate; Jeannette colt two entries. N. Leonard of Cooper, on "Fannie," premium \$5; Rhodes Marshall, of Cooper, on "Anne," certificate.

BLOODED HORSES.

Stallion, 4 years and upwards, seven entries, John F. Taylor, of Howard, on "Lamda," premium \$20; John Turner, Jr., of Howard on "Black Nose," certificate.

Stallion, 3 years and under 4, four entries, Levi Dixon, of Cole, on "Barnum," premium \$15; Samuel Kennon, of Boone, certificate.

Stallion, two years and under three, four entries, Daniel Wade, of Cole, on "Leviathan," premium \$10; John F. Williams, of Howard, on "Black Nose," certificate.

Stallion one year and under two, five entries; Jeremiah Dixon, Cole, on "Roebuck," premium \$8; John F. Williams, Howard, "Young America," certificate.

Stallion Colt, five entries; Samuel Chambers, Cooper, on "Black Whip," prem. \$5. O. Guitar, Boone, on "Eagle," certificate.

Mare, four years and upwards, twelve entries; Levi Dixon, Cole, on "Faith," premium, \$20; G. W. Easlee, Cooper, on "Lady Jackson," certificate.

Mare, three years and under four, five entries; Jeremiah Dixon, Cole, on "Rebecca," premium, \$15; Ambrose Moss, Howard, on "Mary Dawson," certificate.

Mare, two years, and under three, four entries; Jack White, Howard, on "Mary Dawson," certificate.

Mare, two years and under three, four entries; Jack White, Howard on "Mary Buckstone," premium \$10; Thos. Morrow, Morgan on "Lucy," certificate.

Mare, one year and under two, three entries; J. B. Clark, Jr., Howard, on "Fannie," premium, \$8; J. S. Houx, Cooper, certificate; Mare Colt, six entries; G. W. Baslee, Cooper, on "Salina," premium, \$5; J. S. Brooks, Heward, on "Pinkey Bascom," cert.

HARNESS OR FLOW HORSES.

Stallion, four years old and under, eleven entries; G. S. Smith, Saline, on "Billy Waggoner," premium, \$20; John Miller, Howard, on "Pensylvania," certificate; Stallion, three years and under four, two entries; W. T. Redman, Cooper, on "Sack Twener," premium, \$20; A. M. Childs, Franklin, on "Fear Not," certificate; Stallion, two years and under three, four entries; Willis Hughes, Ray, on "Sir George," premium \$10; Benjamin

Herndon, Cooper, on "Young Baster," cert. Stallion, one year old and under two, four entries; Joel Scott, Saline, on "Mammoth," premium \$8; W. T. Redman, Cooper, on "Koskiasko," certificate; Stallion Colt, four entries; P. G. & W. W. Walker, Cooper, premium \$5; P. H. Eads, Cooper, certificate; Mare four years old and upwards, fifteen entries, H. R. Walker, Cooper, on "Nelly," premium \$20; Wm. Davis, Monroe, certificate; Mare three years old and under four, six entries; J. Buchanan, Cooper on "Nora Crelna," premium \$15; W. T. Redman, Cooper, on "Aura," certificate.

Mare two years and under three, two entries; John J. Kelly, Cooper, on "Tabitha," premium \$10. C. Harness, Cooper, on "Maria," certificate.

SADDLE HORSES.

Awarding committee—H. Boone, Cooper; A. W. Morrison, Howard; John Jamison, Boone; M. R. Tarlton, Callaway; John S. Nowlin, Saline.

Stallion, four years old and upwards, five entries, John Sampson, Callaway, on "Young Hickory," premium, \$15; Thos. Potter, Cooper, on "Pilot," certificate; Stallion, three years old and under four, no entries; Stallion two years and under three, no entries; Stallion one year and under two, one entry; Ira S. Brooks, Howard, on "Willie Quick," premium, \$8; Mare four years and upwards, eleven entries; James Harris, Boone, premium, \$15; Thos. Potter, Cooper, on "Eliza," certificate; Mare, three years and under four, three entries; J. H. Tindall, Howard, on "Laura Tindall," premium \$10; Drake Newkirk, Moniteau, on "Mary Chompin," certificate; Mare, one year and under two three entries; John Houx, Cooper, premium, \$8; J. F. Houx, Cooper, on "Fannie Ross," certificate; Gelding, thirteen entries; A. Hicks, Audrain, on "Buck," premium \$10; Thomas Barker, Monroe, on "Henry Clay," certificate.

SWEEPSTAKES.

Awarding committee—Franklin Hickox, Moniteau; G. Pratt, Marion; C. A. Hayden, Green; B. J. Brown, Ray; A. S. Walker, Cooper; Wm. Wilson, Kentucky.

Mule, seven entries; A. & H. C. McPike, Pike, premium \$50; Dr. W. T. Thornton, Henry, certificate; Stallion, twenty-one entries; Levi Dixon, Cole, on "Barnum," premium, \$50; Willis Hughes, Ray, on "Sir George," certificate; Mare twenty-five entries J. F. Williams, Howard, on "Young America," premium, \$50; Thomas Tindall, Howard, on "Fannie Grey," certificate; Pony, eight entries; R. L. Bradley, Cooper, on "Dove," premium, \$50; John Howard, Cooper, cert.

JOS. L. STEPHENS,

Recording Secy.

Agricultural Education.

If ever American agriculture reaches the degree of perfection to which its immense importance entitles it, and which all its true friends earnestly desire, it will be accomplished by other means than those which have prevailed generally. There is a spirit abroad amongst the yeomanry of our land, whose teachings tend to a decided reformation in our system of agricultural education; but its precepts are uttered in mere whispers yet, compared with the thunder cones in which they should and will eventually be proclaimed. We have the singular and lamentable fact to record, that while the vast majority of the millions of American youths, (now receiving the education intended to fit them for the various pursuits of life,) are destined to become cultivators of the soil, there is scarcely a single instance in which the elements of their future calling are taught either theoretically or practically. Lectures on Agricultural Chemistry form, it is true, a part of the regular course of study in a very few of our colleges; but how meagre a place in this great vacancy do they fill, when it is remembered that those who have the privilege of attending them, do not form one fifty-thousandth part of the mighty mass who require these teachings most. Success in any pursuit in life is made to depend mainly upon the degree of knowledge of its leading principles which is possessed by those pursuing it. If this knowledge is vitally essential to the success of the lawyer, physician or divine, why is it not equally essential to the tiller of the soil? Who ever heard of a distinguished lawyer, whose eminence in his profession was not the result of patient, methodical investigation of the elements upon which the science of law is founded? And who of those whose attention has in the slightest degree been given to the subject, is willing to admit that agriculture in its details, is not as complicated and intricate a profession as the law, requiring as thorough investigation, and as extended a range of scientific knowledge? And yet, in the face of this undeniable truth, we find multitudes of farmers who conceive that being born on a farm is a sufficient qualification for the sons who are destined to become their successors in the cultivation of the soil. There appears to be an impression abroad that a farmer's son has a peculiar instinct for the duties of the farm, and that he will take to them as naturally and successfully as a newly hatched duckling takes to the water. There are those who entertain still narrower ideas, and conceive that all the essentials of successful farming are comprised in the purchase of a fine farm and improved stock, and that all that is ne-

cessary to secure premium crops is to plow their grounds and sow their seed.

We once read a communication in the Boston Cultivator, in which the writer attempted to show that a steady reliance on Providence was the most effectual cure for potato rot. Although we fully agreed with him, that our reliance upon the Supreme Ruler of the Universe should be strong and steadfast, we could not but think the man either a fool or a madman; for Providence always helps those most, who strive to help themselves. It is questionable, however, whether that writer was more silly than many of the class to which we have already referred. The majority of these do not even consider it at all Providence in regard to their operations. They are willing, to use a popular phrase, "to go it blind." Is it necessary to point out the result? One word will express it as fully as a volume—FAILURE.

Admitting then, (what may not be denied,) that a full understanding of agriculture requires research as deep and persevering as that of any of the learned professions, and that those who combine scientific knowledge with sufficient practical skill to apply it, are always more successful in the end than those who rely mainly upon mere physical ability to discharge the labors of the farm, how immensely important agricultural education becomes. Who is prepared to estimate the results that would inevitably flow from the careful training of the rising generation of American husbandmen. By this, no disrespect is intended to the farmers of the present day. To the contrary, no class of the community is more deserving of sincere respect and esteem. Their economy, skill and perseverance are all worthy of universal imitation, while in point of natural intelligence they are inferior to no others; but it would be folly to assert that in a general sense, our farmers are educated men. It would be equally unwise to assert the absolute necessity on the part of those intended for the profession of agriculture, to familiarize themselves with the full details of all the branches of science with which it stands connected. The complete mastery of either of the great branches of knowledge, light from which has poured so profusely upon the pathway of the husbandman, were in itself, the work of a lifetime. Fortunately, such devotion to science is not required at the hands of the young farmer. Invaluable as its possession would be, its acquisition would involve such an expenditure of time and money, that the lifetime of a Methuselah, and the wealth of a Croesus would scarcely suffice for its accomplishment. He may be a scientific tiller of the soil, and yet not devote more time to study than every

farmer's leisure hours will admit. For able heads and willing hands have so simplified the great principles of farming, that every man who will, may render himself familiar with them.—*Progressive Farmer.*

Fall Plowing.

The custom of plowing in Autumn for early spring crops has been steadily increasing among us for nine years. The advantages of it are so many and so decided that it has but to be tried to commend itself to practice.

In our Northwestern climate there are some peculiar inducements to it which do not exist to such an extent elsewhere. Our spring seasons are very uncertain. Sometimes we have a spring, and sometimes we do not. The frost is likely to hold on, or the rain deluges the ground to such an extent that there is no time for plowing; and the spring crops which await it are either very much curtailed in quantity or are put in at so late a period as to turn out but poorly. On the other hand, our autumns are glorious. They are that on which we plume ourselves. Anybody who wants to know what autumn can be, should live in the vicinity of these great Lakes, whose waters; when once thoroughly warmed by the summer, keep the air about them warm, till winter has come to others. Hence, while we have little time to plow in spring we have an abundance of it in the autumn.

The testimony of experience is that fall plowing for early crops is not only as good as that in the spring but that it is better, on a large class of our soils, since their tendency to lightness is such that the settling which the frost gives them is rather a benefit than a damage. On the other hand, clayey lands cannot safely be sowed early enough for spring crops if the plowing is delayed over winter, since plowing only serves to make the surface into mortar. Fall plowing for clay lands is the very thing for them, heaving them up to the frost, which is their great agent of fertility.

On all hands, then, fall plowing is the thing. Let us urge to a full use of it while the calm, smoky days of October and November last. While some gather the potatoes and the corn, let others keep the team in motion.—*Prairie Farmer.*

From the Prairie Farmer. Under Draining.

I would like to say one word, more to my farming brothers on the subject of under draining. I have said in a former number of your paper that I have made under drains by cutting my ditch two feet wide and two feet deep, with a vault in the bottom, and covering the vault with timber laid cross-wise, and covering with earth. This answers very well; but this is an age of improvement; and I have found a better and cheaper, and by far a more durable way, I think.

I now commence my ditch, say twelve inches wide at the top, two feet deep, and seven inches at the bottom. Then sink the vault one foot deep with a tool made for the purpose. The tool should be five inches wide at the top and run with a true taper to the bottom, which should be two inches in width; the tool should be a little hollowing and polished perfectly bright. The vault should be about six inches at the top and two at the bottom. Then I split out timber, of any durable kind, six inches wide on the wide edge, and from four to six inches deep, and of convenient length; then lay the timber length-wise in the ditch with the narrow edge down. It fits in like a wedge. The more weight you put upon it the tighter it fits. The timber leaves a hole below it, from six to eight inches deep for the water to pass through. There should be a good fall where the ditch is commenced so as to carry the water off below, then it does not require much fall as you go up to carry off the water. This ditch cost for making it 25 cents per rod when completed. This kind of ditch properly made will last, I should say, a great while I am getting some four or five hundred rods put in this season.

Illinois needs thousands of miles of under drains. They will pay, and pay quick, too. I hold that it is better policy for farmers to improve their lands now that land has got to be worth \$40 or \$50 per acre, than to buy any more land. It is certainly better to raise sixty bushels of corn or thirty bushels of wheat on one acre of land, than to have to cultivate two acres to get that quantity.

The Family Circle.

Conducted by
MRS. MARY ABBOTT.

Mrs. Abbott has been absent during the past month, and at the time of going to press we have received no articles from her for this number. We have but a small space for this department this month, but hereafter we will see that those composing the "Family Circle" are not forgotten.

We have received the following contributions which our readers will find interesting.

CLEANLINESS.

The Bible ranks cleanliness with godliness. We have always observed that men rank in the scale of worth about according to their cleanliness. Savages are filthy. Low-bred, ignorant, vicious people are generally filthy. Filth and vice are twin sisters. It is so the world over. Look at the races, tribes, clans of men. The barbarous, half-civilized races and nations evince a little more neatness, but they are still far from cleanly. Intelligent, refined, high-toned people are neat. They avoid filth. They love cleanliness. They make a free use of soap and water. Soap is a product of civilization. It is not found among savage and barbarous people.—You can judge the intellectual and moral standing of a people by the amount of soap they use. The kind of soap indicates the degree of refinement. Coarse, bad smelling soap, will be found among bad smelling people; fine savory soap among those more elevated and refined. There is a good deal of meaning in soap. It is cleansing, and hence promotes health and happiness; promotes civilization and improvement; promotes the morals and peace of a people. Besides it is a type of religion. Soap purifies from physical filth, religion from spiritual filth. Soap cleanses the body, religion, the soul. The "fullers soap," is frequently used as a type of Divine truth, or religion of the Savior who came to save men from their sins. If men

will not save themselves from their filth, how can they be saved from their sins? Soap and water! Great cleansers! Freely use them. We said that cleanliness promotes health. And so it does, in two ways. First, it keeps the pores of the skin open so as to permit that free exhalation from the body, so necessary to health; secondly, the use of water in cleansing our persons, operates as a healthy tonic to increase our strength. It is better than iron or quinine. We have in these latter days a system of medical practice founded upon the idea of cleanliness with the use of water. And it promises to modify the medical practice of the civilized world. All medical men now recommend cleanliness. If any who profess to be medical men do not they are not fit for the practice. There is still another way in which cleanliness promotes health. It keeps the air pure. Pure air is one great essential of health. Nearly all epidemics originate in filth, stagnant water, bad air vitiated by foul miasmas. People are just beginning to learn that to have healthy cities they must be kept clean. So to have healthy families they should be kept clean. Clean bodies, clean dishes, clean clothes, clean floors and ceilings, clean cellars, clean yards and barns, clean out-buildings and clean grounds about are necessary to perfect health at home. To eat filthy food, drink filthy water, breathe filthy air, wear filthy clothes, live in filthy houses, and keep filthy bodies, is to prepare the way for sickness and death and get the mind so accustomed to filthy things that it will have filthy thoughts and possess a filthy character.

The stench arising from filthy clothes and body must be continually breathed. Breathing it poisons the blood and weakens the system. As a matter of taste, it is worth everything to be clean. A dirty flower, or dress, or face, looks badly enough. Among farmers especial care is necessary in relation to this subject. Dirty pools, and pens, and corners, and holes, will gather about a farm house with-

out a great care to avoid it. Cellars will get foul from decaying vegetables, from dampness, from neglect, from many causes. Floors and clothes will soon gather foulness unless carefully watched. To be clean it is not necessary to live in the suds, be always washing. Let care be observed in keeping clean. It is not necessary to carry mud into our houses by the quart, nor get ourselves into every dirty place, nor rub ourselves against every foul thing. A little care will save much labor. "An ounce of prevention is worth a pound of cure." Teach the children to be clean. Let cleanliness be the love of home.

Words.

Words are little things; so are drops; but the one make up the ocean and the other the speech of mortals, one of the mightiest engines of power. Words! How clean they are. They come without price at the moment and at the bidding of the will. And yet how valuable they are. They may buy what gold cannot; they may do what laws cannot. A word may make a friend that gold cannot buy, or wound a love that laws cannot cure.

Words and Home are near relations. Kind words make home earth's pleasantest place. Unkind words make it equally unpleasant.

Father, if you would have your home happy, teach by your own example that none but kind words should be spoken there. Mother, if you would rejoice in your home, see that all the tongues you control utter no words but kind ones.—Brother, sister, if you would enjoy your home sweeten it well with kind words.—They cost so little it would seem that every home might be full of them. Wise words and kind ones and plenty of them make home almost heaven.

MAN AND WOMAN.—Man is strong—woman is beautiful. Man is daring and confident—woman is diffident and unassuming. Man is great in action—woman in suffering. Man shines abroad—woman at home. Man talks to convince—woman to persuade and please.

Man has a rugged heart—woman a soft and tender one. Man prevents misery—woman relieves it. Man has science—woman has taste. Man has judgment—woman sensibility. Man is a being of justice—woman is an angel of mercy.

Patience with Children.

"One of the great prerequisites for the successful training of children, at home or in the school-room, is *Patience*. Every teacher, whether the mother or an hireling, will find her labors made easy by the constant exercise of this cardinal virtue. If they 'let patience have its perfect work' in their own hearts, it will be visible in all their conduct, and exert a salutary influence upon the minds of the young, in whose future well being they feel a deep interest.

"There may be hours, when, perplexed with care and worn out with undue labor, the mother may feel the risings of impatience in her heart; but let her not give way to this baneful emotion, but nip it in the bud before its fruits become visible in acts of which she may afterwards bitterly repent. Let no unkind word or hasty blow be given in anger, lest the remembrance of it should prove a poisoned arrow to their bleeding heart, when those loving eyes are closed in death, and the head which nestles on her bosom is pillowed in the grave. Children are won by kind words, but cross looks and harsh tones deter them from seeking our sympathy or giving us their confidence. The mother or teacher should regard the sports of childhood as a blessing, join in their innocent amusements, and draw from thence some useful lesson for future consideration. They should learn to look up to her as a *friend* in whom they can confide, who will bear patiently with their childish follies, and in kindness seek to improve whatever may be amiss in their manners or morals.

"But should they turn a deaf ear to her teachings, and scorn her instructions, seeming inclined to follow the evil promptings of a sinful and perverse heart, she has then need of a double portion of patience to support her in this great trial, and enable her at last to 'overcome evil with good,' and bring them, by the force of precept and example, to walk in wisdom's pleasant ways. Be kind, be firm and patient, and hope on till the desired result is obtained."

When the heart is sad and a despondency sits at the entrance of the soul, a trifling kindness drives away despair, and makes the path quiet, cheerful and pleasant.

Breaking Colts to Bit and Harness.

Much may be done with young horses in the way of cultivating their good manners, and forwarding their education—or breaking, as it is usually termed—before the aid of the colt breaker is required. Foals should be accustomed to familiarities, fondling, and kind usage, from their birth; and if that kind treatment be continued as they grow up, they will occasion very little trouble when the time arrives for them to be broken. Before that operation is commenced, it is desirable that a bit should be placed in the young animal's mouth. Any plain snaffle of sufficient substance answers the purpose. There should not be any reins attached to it; it should be merely suspended by the head piece. The colt will thus learn to play with the bit, which will tend very materially to the establishment of a good mouth, care being observed that the bit is suspended evenly by the proper length of the head piece. This may be adjusted by any quiet, good-tempered person, to whose care the young creature is entrusted, and may be left on from one to two hours daily. A loose box, hovel, or small yard, is the most suitable place for the purpose.

It is a very bad custom, though a very prevalent one, when a young horse is first bitted, to make use of reins, which are drawn tight. A colt breaker, when employed, should therefore be cautioned against it, for it will cause the pupil to contract a habit of leaning on the bit, and probably create a one-sided mouth. By such treatment, many colts will take a position in one corner of the box or hovel, and there stand and sulk; whereas if the bit be used as I have recommended, they will champ and play with it freely, thereby producing that sensibility of mouth which is essential to future perfection.

Breaking to harness may be considered necessary with such horses as are adapted for carriages; and their services after they are three years old may be advantageously called in requisition on the farm. Their first introduction should never be a noisy, heavy cart. The plan which I have adopted, with invariable success, has been to put the harness on so that the animal may become quite familiar to it in the stable, after which I have a cord attached to each trace. The horse is then led out by an assistant, and another man, with the cords in his hands, offers a slight resistance, as the animal moves forward; by this initiation the alarm frequently occasioned by the pressure of the collar against the shoulder is avoided, as the man who holds the cords can instantly relax them, if necessary. After two or three lessons of this kind, neither trouble nor danger need be apprehended in putting the animal to any employment calou-

lated for the advancement of his education in the art of drawing.—*London Farmer's Mag.*

The Health of Cattle.

The *American Veterinarian* contains the following good advice towards promoting the health of cattle. There is a good deal in the following paragraphs expressed in a few words:

Mix, occasionally, one part of salt in four, five, or six parts of ashes, and give the mixture to different kinds of stock. It promotes their appetites, and tends to keep them in a healthy condition. It is said to be good against bots in horses, murrain in cattle and rot in sheep.

Horse-radish root is valuable for cattle. It creates an appetite, and is good for various diseases. Some give it to an animal that is unwell. It is good for oxen troubled with the heat. If animals will not eat, it voluntarily, cut it up fine and mix it with potatoes and meal.

Feed animals regularly. They not only love their food at the usual time, but their stomach indicates the want at the stated period. Therefore, feed morning, noon and evening, as near the same time each day as possible.

Guard against the wide and injurious extremes of satiating with excess and starving with want. Food should be of a suitable quality, and proportioned to the growth and fattening of animals, to their production in young and milk, and to their labor and exercise. Animals that labor need far more food, and that which is far more nutritious, than those that are idle.

Guard all descriptions of stock against cold and exposure, especially against cold storms of rain, sleet, and damp snow, and against lying out on the cold ground in cold nights, in the spring and fall.

DRIED TOMATOES.—We find the following receipt among the correspondence of the *Ohio Farmer*:—Take ripe tomatoes, scald them in the usual way, and strip off the skins, or mash and squeeze through a sieve; then stew the pulp slowly so as to evaporate as much juice as possible without burning; spread it on a platter, and dry it in a slow oven or hot sun. When wanted for use you have only to soak it soft, cook a few minutes, and serve it up as you would tomatoes stewed fresh from the garden.

Useful Hints,

To keep Potatoes in Cellars and Pits from Rotting.—You must be careful to dry them well at digging time on the barn floor, or other convenient place, for four or six days; then put some of them into the cellar or pit about one foot thick, and strew a little slaked lime over them; then another foot of potatoes, and another sprinkling of lime, and so on, till all your potatoes have been secured. They will take no harm when packed in this manner, though two thousand bushels should be placed in one heap.

FOOD FOR CHICKENS.—Boiled potatoes mixed with coarse Indian meal, are, perhaps, the best food for fattening poultry. For laying hens, meat is necessary. Lime must also be within their reach at all times. Pepper has been found excellent to make hens lay. A recent writer says:—"I was clearing out some red pepper seeds, and threw the shucks promiscuously about. I soon observed hens picking them up and swallowing them with great avidity. They soon commenced laying eggs, though they had laid none for a month before. I fed regularly too or three times a week since then with red pepper, and they have never stopped laying summer or winter, spring or fall, except while they were hatching their chickens; and I am confident that by this method they may be made to lay the year round."

RULES FOR MILKING.—If you would have a gentle cow, you must be gentle yourself.

If a cow kicks much, place a switch under the left arm, the pail in the left hand, and, if while milking, she kicks let it be followed invariably by single blows. Never strike but once at a time, even if she kicks so hard as to break your leg; and never omit it, if she hits nothing.

By never striking but once she has no time to "get mad," and it is all the more terrific; who cares for a blow when stimulated by fury.

A small mess of pleasant food at the time will serve to do away with any disagreeable impression in connection with milking.

To be a good milker you must wear your nails short, sit on a stool, milk fast, never scold a cow, never get out of patience, tie her tail to her leg in fly-time, and never wet the teats with the first stream of milk, and never strike a cow for running or kicking. Milk applied to the teats to soften them, dries and forms a glossy varnish, which tends to cause cracking or chapping of these parts. Cold water is much better, becoming quite dry by the time the milking is finished, and leaves the teats clean and soft.

REMEDY FOR THE FOUNDER IN HORSES. I send you a receipt for the founder in horses, which I have never seen in print. I have used and recommended it for fifteen years, and so far as my experience goes, it is a sure and speedy remedy. Take a table-spoonful of pulverized alum, pull the horse's tongue out of his mouth as far as possible, and throw the alum down his throat; let go of his tongue, and hold up his head until he swallow. In six hours time, no matter how bad the founder, he will be fit for moderate service. I have seen this remedy tested so often, with perfect success, that I would not make five dollars difference in a horse foundered (if done recently) and one that was not.—*Cor. Country Gent.*

A VALUABLE COMPOST.—Near every dwelling, but a little out of the way, there should be a place, vat or cistern prepared, where all the scrapings off the door-yard and litter from the garden can be conveniently deposited. Where likewise should be thrown all the woolen rags, and other refuse stuff, such as old boots, shoes, bones, &c., usually committed to the flames by the neat house-wife, upon the return of that ever to be dreaded, "festival" commonly denominated "house-cleaning?" Into this receptacle throw all your brine and soap suds on washing days, and ashes and lime rubbish where leaches are emptied, and occasionally a wheelbarrow load of muck, loam or turf, and you will find at the end of the year, that you have a quantity of excellent manure, far more valuable for many purposes than barn-yard manure.

love.

5.

2502

abolice

cholec,

59 34

World

17 JULY
1997

01430

0000

1991

10

19.2
Lami.

archel.

1999

1992

1000

1997

11

10

10

532

700

•

1

1994

54

6872

634

1998

... ..

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

12

100

100

948 V.

103

yd. by

20

1. *Environ. Biol. Fish.* 1997, 48: 171-180.

ketu;